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THE ZAPOTEKAN LINGUISTIC GROUP.

A comparative study of Chinanteco, Chocho, Mazateco, Cuicateco, Mixteco, Chatino, and especially of Zapoteco proper and its dialects.

BY JAIME DE ANGULO AND L. S. FREELAND.

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INTRODUCTION.

In the Introduction we present the thesis and we outline briefly the problem of the determination of linguistic families, and we devote a few words to explain what may, in general, be expected when one deals with monosyllabic-isolating languages.

The following part of the article is devoted to a presentation of the grammatical structure of each one of the languages in question. Zapoteco proper is considered first, and receives a much fuller treatment than any of the others. Each one of the three major dialectal divisions of Zapoteco proper receives as full consideration as if it were a language apart. It was necessary to do this because our thesis pivots on the evolution at work within the dialects of Zapoteco proper.

In presenting the grammatical structure of these dialects and languages we have followed a purely empirical procedure: in the first dialect presented we consider those points which are peculiar, interesting, and significant. In the next dialect we note the degree of adherence to or of departure from that type; and so on with all the dialects of Zapoteco proper, and then with Chinanteco, with Chocho, etc. In each succeeding case the analysis becomes simpler to handle by simply referring to what has already been said.

The sketches are followed by a certain maount of illustrative text.[1] The phonetics have been reduced to the simplest possible in these texts.

This is to be followed by a presentation of the comparative semantics of the dialects and languages in question. The phonetics have been preserved here with all complexities. This part is given to enable the

[1] This and the following part of the article are to appear in a later number.

reader to judge for himself our contention that the languages of this group are not semantically related.

The last part of the article is a series of texts in which all the complexities of phonetics have been preserved.

All in all, the present article is avowedly a presentation of sufficient evidence to prove our thesis about morphological borrowing, but it is also more than that. It amounts practically to a comparative grammar of all the languages considered.

Our thesis may be formulated as fellows:

In the region of Oaxaca in southern Mexico there are a certain number of independent languages, Zapoteco, Chinanteco, Mazateco, Chocho, Cuicateco, Mixteco, Chatino, which together form a group here termed the "Zapotekan Group" from the name of the best known member. The reason for grouping these languages together is not that they show a genetic relationship through their semasiologies but rather that their morphological structures are similar. This morphological structure common to them all, as well as a certain amount of semantic similarity, is the result of mutual borrowing and infection.

In a previous article[1] one of us took the opportunity to outline the linguistic situation in Oaxaca, and pointed out the fact that the nine languages which Thomas and Swanton lumped together as the "Zapotecan stock" although with avowed misgivings[2] do indeed constitute a group, inasmuch as the same characteristic grammatical structure runs through them all, but that their vocabularies are so different that one is loath to consider them as a "linguistic family" in the ordinary acceptation of that term as implying genetic relationship. In other words, looking at their vocabularies only, they appear so many distinct unrelated languages; looking at their grammatical structures they appear all as built on the same pattern. In the present study we attempt to demonstrate that this morphological similarity is the result of borrowing.

The following must therefore not be considered in any way as an exhaustive presentation of any of the languages considered. Everything has been sacrificed which was not of direct import to our thesis. At the same time we think that we have covered the ground with enough detail so that the present study may remain as a source of consultation for linguists.

The introductory article mentioned above was followed by two others in the same journal:[1] Inasmuch as a great deal of our material was incorporated in those two studies we have felt at liberty to omit or simplify much of it in the present one.

All of our material was collected by one of us in the manner described in the first of the articles mentioned, while engaged in a linguistic survey of the region of Oaxaca for the Department of Anthropology of Mexico under the Direction of Manuel Gamio.

For reasons of convenience we have made a distinction between the two terms Zapotekan and Zapotecan, the first to apply to the whole group, the second to be limited to Zapoteco proper. For the other languages we have preserved the usual Spanish spelling: Chinanteco, Mazateco, etc.

The Determination of Linguistic Families.

So much of the following study depends on the attitude taken in regard to the general question of linguistic relationship that it

[1] 'The Linguistic Tangle of Oaxaca', Language, I, 3, 1925.

[2] 'Indian Languages of Mexico and Central America' by C. Thomas and J. R. Swanton, Smiths. Inst., Bur. Amer. Ethn., Bull. 44, Washington, 1911. This is the standard work on the languages of this region. For later works and further attempts at classification consult the bibliography in 'Les Langues du Monde' pp. 629—638.

[1] The Development of Affixes in a group of monosyllabic languages of Oaxaca, Language, II, 1 and 2, 1926; Tone Patterns and Verb-Forms in a Dialect of Zapotek, Language, II, 4, 1926.

seems necessary to restate the problem. It has been pointed out by F. Boas in 1894[1] and dwelt on by the same author in the Introductory Remarks to the International Journal of American Linguistics[2] in which the problem of morphological borrowing is discussed. Prof. A. L. Kroeber has also discussed the matter in a brief but excellent paper published a number of years ago[3].

We agree with these views, and if we restate the problem now, it is only for the sake of establishing a set of premises by which to measure the amount of evidence here presented in the case of the Zapotekan Group.

In the first place, what is genetic relationship? It seems to be generally understood and accepted that genetic relationship is to be established by the common possession of phonetically similar root-words. Back of this is the assumption that out of one language several others develop in the course of time, changing in their evolution their sounds and their structure to a greater or less degree, but retaining over long periods of time enough of the original character of their semantemas to allow of recognition. It is held that there is some borrowing of semantemas, but that this is only superficial. Essentially, both semantic and morphological features change and develop only in accordance with an inner linguistic drift. Back of all this lies the further assumption that languages are like the organic bodies of biology and follow evolution in the same general manner.

This appears to us to be the vital point of error, for it ignores the fundamental principle that language is not an organic body, but a manifestation of culture.

[1] International Congress of Anthropology, Chicago, 1894, pp. 339—346.

[2] Vol. I, (1917) pp. 1 et seq.

[3] 'The Determination of Linguistic Relationship', Anthropos, Vol. 8, (1913), pp. 389 et seq. See also Roland B. Dixon and Alfred L. Kroeber, The Native Languages of California, American Anthropologist, N. S. Vol. 5, (1903), pp. 1 et seq.

1*

Now, the very essence of culture is borrowing and infection. Just as two peoples in contact will infect each other with their social institutions and mechanical arts of life, so we may except them to infect each other in their respective languages.

It may be expected that this "infection" will extend alike to the two fields of language; both to the semasiology and to the morphology[1].

Languages, we feel, are constantly changing, not only in accordance with tendencies at work within them, but in response to influences from without. They are not organic bodies, but cultural phenomena, and behave in the same way that other cultural phenomena do. Their existence is ephemeral; as entities they may be caught only at a certain moment of time.

According to this point of view, it is not of primary significance to the student of human history whether or not a certain language N, for example, is the ultimate échelon in a series of changes from an original A, with which it now holds only a few points of resemblance. It is of greater interest to him that it has acquired, through one means or another, enough points of resemblance to a third language M (which perhaps is a lineal descendant of B, unrelated to language A) so that N and M resemble each other. His concern will be less to classify "genetically" N with A and M with B, than to group "culturally" N and M together.

Not that we would deny the importance of genetic continuity in the life of language, as well as infectional levelling. Both these poles exist and should be recognized; what

[1] It cannot be stated a priori how much more to one field than to the other, not even in general terms. It will always depend on the conditions of the particular case. Any general laws could only be derived from the study of a great many cases. At most perhaps the borrowing of isolated semantemas can be compared with the borrowing of isolated cultural elements, and the borrowing of morphology with the borrowing, more or less whole, of a cultural complex.

we deny is their mutual exclusiveness; the rejection of either for the acceptance of the other.

Both of them are factors at work, and each one of them is manifested both in the semasiology and in the morphology of language.

The Isolating Type of Language.

The reader can easily see from what has been said in the preceding sections that the thesis of the present study is built mainly around the proposition that what the languages of the Zapotekan family have in common is a certain morphological structure. This may roughly be called the "monosyllabic-isolating type". Let us now consider what we mean by this term.

It is evident in the first place that these two expressions "monosyllabic" and "isolating" are not synonymous, although in the minds of many people they probably are so. Rather, they are descriptive terms of a different order. Monosyllabism is a question of semantics (whether or not the word is a single syllable). Isolatism[1] is entirely a matter of morphology. It denotes a structure in which a sentence is composed of separate words each of which stands entirely by itself and is not susceptible of changes of form, nor modifications of meaning.

We may have monosyllabism without isolatism, as when English rings changes upon her monosyllabic words: foot, feet; sing, sang, sung; etc. Such changes take us as far from isolatism as though we had added a string of suffixes. And we may have isolatism without monosyllabism, as when English applies an isolating technique to handle units that are far from monosyllabic (cf. Sapir, Language, p. 208).

[1] "Langues isolantes, celles où les phrases sont formées de mots invariables, ordinairement monosyllabes, et où les rapports grammaticaux ne sont marqués que par la place des termes." Nouveau Larousse Illustré.

What are the characteristics of a truly "isolating" language? Such a language, presumably, does not exist, but we may imagine what the "ideal" type would be. In such a language a sentence is composed of separate words. These words stand up entirely by themselves, as so many counters, or so many pawns in the field. They are isolated from one another. There is no harness connecting one with another. Neither do they join hands. Neither does one look like another one in a slightly modified uniform. Each one is his own whole meaning, and conveys it and nothing else. But (and here we have the eternal crux of language), if each pawn is a meaning, a single meaning, and a whole meaning, then unless by their position in the field, by their position in relation to one another, the causalities and effects, the relations, between them are established, unless, in other words, we have "word-order", we have nothing but a jumble of meanings, not a sentence, or a phrase.

Therefore when we speak of "isolatism" we all have in mind an ideal condition of language: language reduced to its simplest and purest expression, where word and semantema coincide. No compounding, no syllabic manipulation such as metathesis or reduplication, not even sound-variations or prosodic changes[1]. Nothing that will interfere with the singleness of meaning of the word. No grammatical process except word-order.

Phonology.

All the languages of this group share the same system. The phenomenon of diffusion of a complex of phonetic characters over a large area irrespectively of genetic language affinities is a well known phenomenon. It is

[1] Distinctions of pitch, quantity, and stress when not used to effect a change of dress, a differentiation, are not grammatical processes at all. They are as much a part of the phonema itself as consonant or vowel, and therefore belong to semantics, not to morphology. In this capacity they would not constitute a departure from "isolatism".

all the more remarkable therefore to find that two of the languages spoken in this territory, Mixe and Chontal, do not share the Zapotekan system. This is another argument in favour of the theory that their arrival in the Oaxaca region is more recent.

The two outstanding features of the Zapotekan system are pitch tone and nasality.

Pitch-tone. Pitch may be considered either morphologically or semantically. In the latter role it is an extremely important element in all the languages of the group. The natives themselves are well aware of it. Morphologically, pitch is a grammatical process and consists in variations of tone in the radical or in the grammatical element, whereby certain grammatical categories are expressed. Semantic tone is easy to determine, as long as there is no grammatical tone in the language: all that is needed is a fairly sensitive ear and a certain amount of training in the recording. But when tone is used as a grammatical process, the analysis becomes very difficult for it becomes necessary to determine which is the fundamental tone and which is the variation. For instance, all the Zapotekan languages, as we shall see, treat both the verb and the noun in the same manner, by relating them to person. Now if all made use of tone changes to express person (high for the first, low for the second, rising for the first plural exclusive, etc.,) it would be easy to determine this. In such a case one would except to find either that all radicals whatever their tone when expressed without personal relation followed the same pattern when so related, or that according to the primary semantic tone certain classes of morphological patterns were established. This is what has been done by one of us for the Valley sub-dialect of Zapoteco proper[1]. Unfortunately the case is not so simple. Not all the languages, nor all the dialects of one language, use tone uniformly to express person. Chocho appears to do it pretty consistently for the verb, but not for the noun. Chinanteco does it (with many irregularities that are indicative of a system of classes) for the "inanimate gender treatment", but not for the animate. Chatino has it for three of the persons but not for the rest. Mazateco does not appear to make much use of it grammatically, except to express the negative. Zapoteco of the southern mountains appears to have only semantic tone, with a possible exception of a reversal of tone to indicate objectivity. It is easy to see that for a good study of morphological tone one needs a great amount of material, much more than we have at our disposal.

Nasality. It may be well to point out for the sake of those who are not familiar with nasality that there are three main types of nasalized vowels according to the way of ending them. In a nasalized vowel the peculiar nasal timbre is due to the fact that the soft palate is lowered more than usual so that more of the vibrating voice goes out by way of the nasal passages than in the non-nasal vowel. In this respect all nasalized vowels (*ụ, ǫ, ą, ę, į*) are similar, except of course that the nasality is less striking for the extremes *ụ* and *į* because in these positions the size of the oral cavity is much reduced. In ending the nasalized vowel however, three different methods may be used: 1^0 the soft palate is completely lowered, shutting off entirely the emission of voice through the oral cavity, and the voice *still vibrating* continues to come out through the nasal passages for a shorter or longer period of time: this is essentially the sound of the continuant velar consonant *ŋ*, and the nasalized vowel in this case may well be written *ąŋ, ęŋ*, etc. (this method is predominant in southern French) 2^0 the emission of voice is cut off short, either by glottal closure (which may be very feeble) or by passing on immediately to the next fonema: the nasalized vowel in this case needs no special notation besides the nasalization sign, except the

[1] "Tone Patterns and Verb Forms in a dialect of Zapotek." LANGUAGE, II, 4, December 1926.

glottal catch mark if this is significant. (This method is prevalent in northern French). 3° the soft palate is lowered, but the breath *non-vibrating* continues to come out through the nasal passages for a longer or shorter time. This is the same kind of nasal breath which precedes *m* or *n* or *ŋ* in many North American languages. It may be written *h̨*, but the symbol *h* is really sufficient if used in context with a nasal vowel or consonant. Or instead of *h*, the breath sign may be used (ʿ) [this method of releasing a nasalized vowel corresponds in fact to aspiration in the non-nasal class]. These aspirated nasal vowels are peculiar and characteristic of Zapotekan phonology. The nasal aspiration may be heard quite a distance away when pronounced carefully. In rapid speech of course it is apt to be blurred, but so is any other method of release.

Vowels. As regards quality, the Zapotekan system is predominantly normal, *except in Chinanteco* where the abnormal vowels *ü, ö, ë, ï* (rounded front, and unrounded back) abound. As a rule, the normal vowels are open (ʊ, ɔ, ɑ, ɛ, ɪ), rather than close.

Taking in therefore nasality and release, we have in the Zapotekan group the following scheme:[1]

- a^a vowels ends in a slight reduplication or echo-vowel
- a'^a vowel ends in a glottal catch which is followed by the echo-vowel (usually in a slightly different tone)
- $a^ʿ$ vowel ends in oral aspiration (very apt to become an actual fricative *x*)
- $a^ŋ$ nasalized vowel ends in nasal vibrations.
- *a̰* or *a̰'* nasalized vowel ends abruptly or is closed by glottal catch.
- *a̰h̨* nazalised vowel ends in nasal aspiration.

In the actual practice of rapid recording it was often found necessary to leave the method of release in doubt.

Palatalization. This tendency is quite marked in the whole region (including Chontal and Mixe). It is often accompanied by a pseudo-metathesis. Thus *ta* or *ka* may become *tya* or *kya* at any moment, and lead to *ita, ika*. On the other hand *y-* becomes *jy-*.

l, r, and n. These three consonants are interchangeable to a marked degree throughout all the Zapotekan languages. When present, *r* is strongly trilled and alveolar. By the side of this *r* is a peculiar consonant which may be written *jr* or *cr* and is produced with the tongue in strongly retroflex position[1]; it is somewhat similar to the American-English pronounciation of shriek, shrapnel, shrike, etc. In Zapoteco of the Valley the trilled *r* is often associated with *s* (*rsil* day). In Chocho the same sound is associated with *h* (*rho* hand).

Surd vs. Sonant. Surdity vs. sonancy is not a factor in Zapotekan phonetics, the stopped consonants appearing to be fundamentally intermediates.

Labials. True dento-labial *f* and *v* are certainly present in Chinanteco. In the rest of the Zapotekan group the fundamental sound is a bilabial semi-fricative β (similar to the Spanish sound); it shows a tendency to oscillate toward *b* rather than the surd fricative bi-labial φ.

Gutturals. Velar sounds (except the velar *ŋ*, which at that is most often associated with *g* as *ŋg-*) are not found. Post-palatal fricatives *x̣* and *γ*, are frequent, the sonant especially having given the Spaniards a great deal of trouble to transcribe. The stop *k* is often associated with *w* as *kw-*, and in this connection it must be mentioned that the jump from palatal to labial articulation bears every ear-mark of being a frequent phonetic phenomenon in Zapotekan.

[1] Cf. a similar analysis by Prof. Boas in his "Notes on the Chatino language" (American Anthropologist N. S. Vol. 15, No. 1, 1913).

[1] Also described by Boas in Nahuatl, Proceedings of the XVIII International Congress of Americanists London, 1913, p. 107, and in Keresan, Keresan Texts, Publications of the American Ethnological Society, Vol. 8, Part 1, pp. XI, XII.

c-sounds. These are entirely interchangeable with *s*-sounds.

Glottalized and "fortis" consonants. These are not very marked except in Chatino, which seems to be peppered with glottalizations of all kinds.

Whispered Sounds. These are frequent in Zapoteco and Chatino, where many words *must* be whispered, however strong the whisper.

PHONETIC TRANSCRIPTION USED IN THIS STUDY.

We have adhered as closely as possible to the system adopted by the American Anthropological Association[1]. In the body of this article, we have reduced the phonetic transcription to as simple a formula as possible. We have done this both to reduce the difficulties of printing and to make it easier to read. In our opinion it is better to avoid the intricacies of diacritical marks when these do not play a fundamental part in the analysis of the grammatical structure. For a comparsion of the semantics, on the other hand, strict phonetic accuracy is of prime importance; in the semantic lists therefore we have maintained the finer distinctions.

In the matter of tone we have had to extend the A. A. A. system so as to provide for rising and falling tones which involve the middle tone. The principle that we have followed is quite simple: the middle tone is indicated in the A. A. A. system by a vertical mark; starting from this the tone falling from high to middle is represented by the first half of the mark for the falling tone [^] combined with the vertical mark, thus: ˄. The tone falling from middle to low is similarly indicated by the vertical mark plus the second half of the mark for the falling tone, thus: ˅. In the same manner the tone rising from low to middle: ˂, etc. A tone falling from high to low and then rising to the middle and carried for a short time on the level middle is indicated by the falling tone plus the vertical mark: ˄̨, etc.

In the texts given in the body of the grammatical exposition all these niceties have been eliminated. All tone indications have been left out except where absolutely necessary. All greek letters have been omitted as nearly as possible: we have adopted in their stead combinations of letters which are most likely to be read by the average English speaking reader in the manner closest to the original, thus *hl* for the surd *l*, *ng* for the velar *n*, *gh* for the sonant velar fricative, *th* and *dh* for the interdental fricatives, *v* for the bilabial sonant fricative, *ö* for the unrounded *o* (but *ï* has been preserved for the unrounded *u)*, etc. The symbol *c* has been preserved for the thick *s* (as in shoe). The combination *nh* (at the end of words) represents the "nasalized breath"; the combination *hn* (at the beginning of words) represents the similar nasalized breath which occurs always before *n*, *m*, or *ng*. A hook under a vowel (*ą*, *ę*, etc.) indicates that the vowel is nasalized as in Parisian French.

MORPHOLOGICAL SKETCHES.

ZAPOTECO PROPER

GEOGRAPHICAL DISTRIBUTION.

Zapoteco[1] proper is spoken over a large area in the State of Oaxaca, and from the

[1] "Phonetic Transcription of Indian Languages", Publication 2415, Smithsonian Institution, (also Smithsonian Miscellaneous Collections, vol. 66, no. 6).

[1] The name Zapoteco (pronounced *sapotéko* in Oaxaca) is derived from *zapote* (< Mex. *tsapotl*), a name given in Mexico to several varieties of trees and to their fruit, but especially to Casimiroa edulis. This fruit is very common in the Valley of Oaxaca and occupies economically about the same place as the apple does with us. The Zapotecos have no name for themselves as a people, but refer to their own tongue as *c-tij-uy* our speech. There is a modern tendency among them to equate the root-word of this expression, in the form of *disa* (or *dica, diza,* etc.), to the name Zapoteco. Some Spanish writers spell the word as Zapoteca, but this is not common.

sociological point of view may be called the principal tongue of the whole region. It is probable that even in pre-Spanish days the Zapotecos were the dominant people. That the territory which they occupy is the most favourable in the region for the development of a culture is well attested by the fact that the Spanish-Mexican culture rooted itself there most firmly[1]. From the point of view of linguistics it would be of great importance to determine exactly how much the Zapotecan culture penetrated the surrounding peoples, and imposed itself upon them. The historical evidence is meagre, but we may presume that the Zapoteco "kings" of Zaachila more or less imposed their rule over the contiguous tribes, the Mixes and the Chontales perhaps excepted. We know that Aztec merchants travelled all over the territory even before the Spaniards came, and it may be imagined that they made use of Zapoteco for their trade-jargon. It is also probable that even in pre-Spanish days the same conditions of inter-local trade and exchange prevailed as exist to-day. At the present time every region of the province specializes in the manufacture of some article, buckskins here, textiles there, pottery in another place, fiber sacks and hammocks, woven hats, dried chiles, etc., etc., and the market-place of the modern town of Oaxaca is the clearing-house for all these articles. Mazatecos, Chinantecos, Chatinos and all the others, go to Oaxaca in caravans, bearing their goods. The trip may take two weeks or more, each way, with halts at pueblos on the route. At each halt there is necessarily some interchange of speech with the local inhabitants, of whom none of the women and adolescents speak any but their own tongue and a few of the men only a broken Spanish. It has thus come about that Zapoteco has become the lingua franca of the region, with Spanish running a close second in modern days. There was no town of Oaxaca in pre-Spanish days[1], but we may presume that Zaachila, not far to the south and probably the "capital" of the Zapoteco kings, fulfilled then the same function as a central mart. In one word: the historical and ecological conditions could not have furnished a better setting for a mutual borrowing of languages, with Zapoteco as the dominant factor.

The dialects of Zapoteco have been variously estimated and labelled, but never seriously studied and compared. Their analysis however is exceedingly important because it furnishes the key to the linguistic drift of the whole region. And, as might be expected, the dialects, with the exception of the "Tehuano", accord perfectly well with the geographical divisions of the country.

The central part of Oaxaca is made up of three high valleys bordered on all sides by rugged mountains. These three valleys run one from the north, one from the south, and one from the west, and all meet the site of the town of Oaxaca. The valley from the north and that from the south constitute therefore for practical purposes one single long one. All the mountains to the west of it belong to the Mixtecos. The valley which comes from the west meets it at right angles and therefore divides the Zapotecan region in a group of northern mountains and a group of southern mountains. These are the essen-

[1] The early colonization of the Spaniards seems to have been carried almost everywhere equally, to judge from the remains one encounters even in the most remote pueblos of rugged mountains. At the present day however, trees grow through the roofs of the churches and the natives go on pilgrimages to sacrifice a chicken to the Virgin of Guadelupe in caves in the hills where the Plumed Serpent appears out of the fog on certain occasions!

[1] The town of Oaxaca was virtually founded by Cortés. It bore then the name of Antequera. Strangely enough it is situated just about astride of the boundary line between Mixteco and Zapoteco speech. Tule, the nearest pueblo to the east, speaks Zapoteco. Cuilapan and Arrazola, the nearest pueblos to the west, speak Mixteco. The boundary line, which otherwise follows the foothills of the eastern side of the valley, here makes a dip to the west and touches the river Atoyac. Perhaps this was the result of Mixteco encroachment.

tial dialectal divisions of Zapoteco as appears from our material, and we have therefore called them Dialect of the Southern Mountains, Dialect of the Valleys, Dialect of the Northern Mountains (v. LANGUAGE, II, map on 132).

For the sub-divisions within each dialect the reader is referred to each section.

DIALECT OF THE SOUTHERN MOUNTAINS[1].

This dialect has sometimes been called the "Miahuateco", from the name of the pueblo of Miahuatlan, the most important town of the region, and one through which nearly every caravan must pass before descending into the Valley. There may perhaps be distinguished two sub-dialects: one in the south-west, with Cuixtla, Yogoyana, the several Coatlanes, the Loxichas, Santa Lucía Miahuatlan, etc.; and one in the south-east, with the Mixtepecs, the Ozolotepecs, Lagueche, Lachiguirrí, etc. The differences between them however are so slight that the two sub-dialects may be treated as one.

Following is the list of the abbreviations used in this paper for the sometimes rather long names of the pueblos where the southern mountain dialect is spoken:

Atn.	Amatlan
Coa.	Coatlan (Sa. M. = Santa Maria, Sn. Pab. = San Pablo, Sn. Ped. = San Pedro)
Coz.	Cozoaltepec (locally: *yàts*)
Laa.	Laachila
Le.	Lagueche
Lí.	Lachiguirrí
Lox.	Loxiche (Sn. Ag. = San Agustín, Sn. Bar. = San Bartolo)
Mia.	Miahuatlan (locally: *ístò*)
Mix.	Mixtepec (Sn. J. = San Juan, Sn. Lor. = San Lorenzo, Sn. Ped. = San Pedro)
Río H.	Río Hondo
Sa. Lu.	Santa Lucia
Sn. Cr.	San Cristobal
Sn. Dgo.	Santo Domingo de la Cañada

[1] In dealing with the names of pueblos in the Oaxaca region it must be borne in mind that each pueblo has two names, one Aztec in origin, and the second Spanish. Very few pueblos are known (except to the natives themselves in their own tongues) by their real name in Zapoteco, Mixteco, Chatino, etc. The Spaniards obtained the names from their Aztec guides. The Aztecs, on the other hand, called by one single Aztec apellation all the pueblos conglomerated in one region. Thus there arose five or six Mixtepecs, eight Coatlanes, etc. and it became necessary to distinguish between them by adding the name of the patron saint of the local church: San Juan Mixtepec, San Pedro Mixtepec, etc. Sometimes the Spanish name alone has survived.

GENERAL ORIENTATION OF THE SOUTHERN MOUNTAIN DIALECT.

Of the three dialects of Zapoteco proper that of the southern mountains comes closest to the ideal monosyllabic-isolating type. In fact it would conform absolutely to that type except for the remnants of the temporal prefixes (almost reduced to mere vestiges in the southwest). A fairly good idea of the feeling of this dialect will be gained by a careful analysis of the following short sentence of three words. This analysis will perhaps appear laboured but it will serve to illustrate the complexities that lurk beneath the simple exterior of monosyllabic-isolatism.

The sentence in question is: *ge-dseb beth ma'* he scared them [literally: scaring child animal]. This was said by one of my informants in Cuixtla when his little boy shooed away some chickens, and immediately he added: "... or you could say: *ge-dseb beth gith*", substituting the word "chicken" for the word "animal". Then I asked: "Could you say: *ge-dseb men ma'?*" (the word *men* signifying simply "person" or "human being"). His answer was: "Yes, that would be just as good. It would be like saying: HE is scaring HIM (él está espantando aquel)."

In the Spanish and English sentences, the pronouns for the third person express gender, number, and case, besides person. And they

do this by themselves, irrespectively of their place in the sentence. The Zapotecan equivalents of those pronouns, "person", "animal", "thing", express only gender by themselves (they also express case by their order in the sentence). For the Zapotecan linguistic mind the world of objects falls into three categories: human beings, animals, things. It is necessary to express this in Zapoteco, either by mentioning the particular name of the object (Peter, thou, dog, chicken, tree, rock, etc.), or by substituting for it its generic name: person, animal, or thing. Thus I may say: *tcug naa yah* cut I wood, but I may not say merely *tcug naa* cut I. If I do not mention the actual name of the thing I cut, I must at least say "I cut thing", *tcug naa kwan*.

Such a sentence, short as it is, typifies the essentials of Zapotecan linguistic expression: it contains the verb, the subject, then the object, in their natural order; and their genders are determined. Everything else is unessential. Number may be expressed, if considered nesessary, by independent words such as "one, many, much, all" etc. Other independent words, (e. g. "face" for the dative and locative) express cases other than the subjective and objective[1]. Time, it is true, is expressed (as "aspect" rather than "tense") by a system of prefixes, but these have all the appearance of being remnants of a stage when the language was synthetic and rich in prefixes. At any rate they are not necessary and the verb is often found as a radical alone without determination of time or aspect.

There is however another grammatical category or treatment which is peculiarly Zapotekan (it is shared by all the languages of the Zapotekan group, besides Zapoteco proper). It gives to all these languages a special twist sui generis. It may perhaps be called *the possessive-predicative treatment of person*. But before attempting to explain what we mean by this terminology it will be best to give a table of the pronouns with a few examples of their use.

[1] These independent words may be considered semantemas or morphemas according to their function in the sentence.

Pronouns — (Pueblo of Lagueche). For variations from pueblo to pueblo, also for pitch tones and exact phonetic rendering see the Semantic List)

I	*naa*
we (inclusive)	*be*
we (exclusive)	*nu*
thou	*lu*
ye	*yu*
he (person)	*men-ba, ca-ba*
he (animal)	*ma-ba*
it	*kwan-ba*

Examples:

I see it	*gwi' naa kwan*
thou seeest it	*gwi' lu kwan*
I see him (person)	*gwi' naa men*
I see him (animal)	*gwi' naa ma*
he (person) sees him (animal)	*gwi' men ma*
he (animal) sees him	*gwi' ma men*
my home	*lij naa*
thy home	*lij lu*
his (animal's) home	*lij ma*
his (person's) home	*lij men*
etc.	

The possessive-predicative Treatment of Person. — It will be noticed immediately by looking at the above examples that predication and possession are treated in essentially the same manner: the verb is related to its subject by simply postpositing the subject to the verb (see I, see thou, see man, see animal, etc.); similarly the noun is related to its possessor by postpositing the possessor to the noun (home I, home thou, home man, home animal, etc.). That is what we mean by saying that predication in the case of the verb, and possession in the case of the noun are treated in the same manner. Both the verb and the noun are in these languages related of necessity to person.

We do the same in our own languages in the case of the verb, but we do not do it in the case of the noun. The latter is a peculiarly Zapotekan characteristic. To elaborate: in

all the languages of this group the noun is treated fundamentally as if it were a verb in so far as it must be attached to a person. You cannot say "foot" alone, but must say "my foot", "your foot", "Pedro's foot", "dog's foot", etc. You must at least say either "human being's foot", "animal's foot", or "thing's foot" (the three genders of Zapoteco).

Possession. — In treating of the languages of this group it becomes necessary to distinguish between two kinds of possession: essential and accidental.

Essential possession. — This applies to objects and beings which are of their own nature referable to some person (or animal, or thing) as his possession: thus foot, home, father, must necessarily be either mine, thine, or someone's, or some animal's foot, home, and father. Possession in this case is expressed by mere juxtaposition of the names of the possessed and the possessor, the possessed coming first and the possessor second in the word-order. Thus, foot I, foot thou, foot Pedro, foot person, foot animal, foot thing. (It will be noticed immediately that the noun "foot" receives here precisely the same treatment as the verb "cut" in the expressions cut I, cut thou, cut person, cut animal, etc.). It is almost impossible to obtain such words as foot, home, father, alone, i. e. without the accompaniment of the person to whom they belong, just as it is impossible in our languages to divorce a verb from the person who performs the action, except in the case of the Infinitive and similar modes. These languages feel the necessity not of defining a noun, as so many languages do, but of relating it by possession. Instead of saying "la main", one says "hand person".

Accidental possession. — This applies to objects and beings whose possession by someone is only fortuitous, accidental, not inalienable: tree, house, horse, servant. Words of this kind are easily obtainable in these languages without the accompaniment of person — although there is a tendency to achieve the same result as is obtained in other languages by definition, by using the *c*-prefix of possession (as in the Valley dialect), or suffixing the enclitic *-na* to be, (as in the Yalalag subdivision of the northern mountain dialect). On the other hand when the fact of their being possessed by somebody needs to be indicated this is expressed by means of the monosyllable *ctcen* (or *ke, tce, cte, na*, etc., according to dialect), which is equivalent to our "of". Thus house of I, house of thou, house of person, house of animal.

In the practice of ordinary speech the distinction between accidental and essential possession is not always adhered to strictly. Words such as house, tree, horse, are occasionally related possessively to a pronoun in the direct essential manner without services of the "of". On the other hand the necessities of the sentence often make the indirect treatment necessary for words like foot, home and father. The distinction between accidental and essential possession is therefore an ideal scheme or tendency rather than a rigid rule.

Word-order. — The normal order in Zapoteco is verb, subject, object. Less frequently it is subject, verb, object.

In the case of attribution (qualification of a noun by an adjective, or of a verb by an adverb, or of a noun by another noun in semi-compounding) the qualifier comes after the qualified: "horse wood" means a wooden horse, while "wood horse" means the wood that belongs to the horse.

The tendency toward Suffixation. — The close juxtaposition of verb-subject-object leads in time to suffixation. This is what has happened to the other dialects, especially the Valley dialect (it will be studied in detail with the latter). In the dialect of the southern mountains one can only find a trace of it here and there, especially in the southwestern region. Thus in Cuixtla, in the treatment of the essential possessive the

pronouns for the first and second persons singular become mere suffixes: *ni-n* = my foot, *lo-n* = my face, *cri-n* = my nose (for *ni na*, *lo na*, *cri na*). But even in the case of the second person the suffixation is rather wavering, thus: *cri lu* thy nose, *ni-l* thy foot, *lo-u* thy face. In this same pueblo which lies very close to the southern end of the Big Valley, there is even a trace of the suffixation of the object "thing" (cf. the "inobjective" treatment in the Valley dialect). Thus: *tyug naa yah* I cut tree, or *tyug na-i* I cut. In the latter case the suffix *-i* may be taken to indicate "thing", but it is noteworthy to observe that the semantema for "thing" in this dialect is *kwan*. It is probable that this *-i* is an extension from the Valley suffix in *-i̯ʸ*. In the southeast region one says simply *tyug na kwan* cut I thing. This *-i* suffix for the gender "thing" is also extended in Cuixtla to the accidental possessive: *ctc na ya* or *ctc na-i*, "my wood" or "it is mine". In the Coatlanes, the *-i* becomes *-ya*.

The merging of the pronouns into gender [or the expression of gender by the pronouns]. — In many languages the third person is the one in which classes of nouns (e. g. masculine and feminine gender), are apparent. This is true also of Zapoteco, except that the "genders" here are not "male" and "female", but "person", "animal", and "thing". In this dialect for the pronouns of the third person the very words "person, animal", and "thing" are used, but so divested of their concrete semantic value that they may be regarded as pure morphemas. The semantic value is however still so close to the surface that different pueblos, and even different individuals of the same pueblo may habitually use different semantemas for the word "person". Thus we have two main semantemas for "person": *me* (or *men*), and *ca* (or *ja*). This, in conjunction with the fact that a demonstrative such as *ba* here, *ga* there, *le* this, is usually juxtaposed or semi-affixed to the word for "person", leads to such discrepancies as the following forms for the third person "human": *me-ba* or *caba-* or *ca-ga* in most of the pueblos, *men-gyi* in Sn. Ped. Mix (*gyi* is properly "man"), *le-me* (Sn. Ped. Mix., Lí.,) *le-ja* (Lí.), *le-jang* (Sn. Lor. Mix.), *nang-dö* (*nang* usually means "a woman") (Laa.), *men-de* (Sa. Cru.), *men-ko* (Ozo., Sn. Ped. Mix.). We see that we have several forms even within the same pueblo. Furthermore one feels that the natives have already lost the consciousness of the separability of the demonstratives *ba*, *ga*, *le*, and feel *me-ba*, *ca-ba*, *ca-ga*, etc., as single words.

The third person gender "animal" is everywhere *ma* (the vowel is sometimes so close as to sound almost like an open *e*), in connection with the same forms of the demonstrative, i. e. *ma-ba*, *le-ma*, *ma-ga*, etc.

The third person gender "thing" is nearly everywhere represented by the semantema *kwan* (with the demonstrative). In Sa. Mar. Coa. however it is *ta-ba*. Furthermore, in the southwestern region it is also represented (as explained in another place) by the suffixes *-i* or *-ya*.

Let us note finally that when these pronouns for the third person become mere suffixes in the other dialects the choosing of different semantemas by different pueblos will lead to a good deal of confusion and in some cases even to mutual non-intelligibility between two neighbouring pueblos.

Number. — Plurality is expressed in the case of nouns by means of independent words only, never by affixes. The two words most frequently used are *re* and *ce*, which may be translated as "all, many, several", etc. (In some pueblos the *re* becomes *gghe*, *gre*, *ger*, etc.). This applies also to the case of the pronouns, especially in the southeastern region, where we have for instance: *re be* and *re nu*, we (exclusive and inclusive); *re ghu*, ye; *re men*, they; etc. There are however many variations from pueblo to pueblo as to the specific pronouns used for we, ye, etc.

The reader is referred for details to our article in Language.

There is also an incipient form of the dual: *rop*. This is clearly a fusion of *re* with the numeral *tcop*, two.

The temporal prefixes. — We have already mentioned the presence of temporal prefixes as the principal exception to the monosyllabic-isolating character of this dialect, and we have also mentioned the fact that these prefixes are probably the remains of an older system when the language was rich in prefixes. This appears from the fact that when compared with the other dialects, the temporal prefixes in this dialect show attrition. In the southeastern region they are reduced to *m-* for the Perfect, *n-* or *dj-* for the Continuative, and the Inceptive is marked by *ghu-* only in rare cases. On the other hand there is in this region a new tendency to indicate the Perfect either by pre-positing the independent word *luc*, finish; or post-positing the word *li*, done. These two auxiliary enclitics are sometimes used in lieu of the normal prefix, sometimes in addition to it. In the southwestern region the prefixes are not in quite such a state of attrition, but on the other hand there is greater confusion and disparity in their use from pueblo to pueblo, and even inside of the same pueblo by different people.

We have recorded the following forms for the *Perfect:* [*gh* represents the sonant velar fricative as in the Parisian *r*] *ghut-, ghwe-, m-, b-*, (Le.); *ggho-, gu-, me-*, (Cux.); *ba-* (Ozo.); *m-* (Sn. Cr.); *b-* (Sn. J. Mix.); *me-* (Sa. Ma. Coa.); *v-* (Li.); *m-, gghu-, m-*, (Sn. Pab. Coa.); *be-, ba-*, (Sa. Lu.); in short, two principal forms, one in *ghu-*, one in *mb-*.

For the *Continuative* we have recorded the following forms: *n-, dj-, r-*, (Le.); *ge-, nge-, ndo-, dzy-, r-*, (Cux.); *nda-, ra-, ky-*, (Sn. Pab. Coa.); *ke-, kay-, ka-*, (Sn. Ped. Coa.); *kye-, keyu-, n-*, (Sa. Mar. Coa.); *ka-, kay-*, (Lí.); *kay-, r-*, (Sa. Lu.); *kiny-* (Sa. Cru.); *kiy-, r-*, (Sn. J. Mix.); in short, three main forms: *n-, k-, r-*.

For the *Inceptive* we have recorded the following forms: [*0-* indicates absence of any prefix] *0-, ghu-* (Le.); *de-, nda-, the-* (Cux.); *0-, gh-, ghu-*, (Sn. Pab. Coa.); *ghu-, 0-*, (Li.); *ghu-* (Sn. Mar. Coa., Laa.,); *gh-* (Sn. Cr.); *g-* (Sn. J. Mix.). In short two main forms: *ghu-, 0-*. It is probable that in this dialect just as in the dialect of the Valleys, those verbs which have the Inceptive in *ghu-* have the Perfect in *mb-*, and those verbs which have the Perfect in *ghu-* have the Inceptive in *0-*.

Prefix mb-- before names of animals. — All animal names begin in *mb-*, thus: *mbak* dog, *mbau* coyote, *mbas* weasel, *mbet* fox, *mbalh* serpent, *mber* turkey, *mbej* leopard, etc. The only exceptions appear to be *gway* horse, *ghon* bull, *gidh* chicken, all three being of course imported animals. Hispanisms like *konex* for rabbit need not even be mentioned.

We shall have occasion to point out a similar use of animal prefixes in other languages of the group. In Mixteco for instance the semantema for animal is *ti*, and *i-ti* means the animal, or an animal; and there is a tendency to prefix either *ti* or *iti* to the names of animals: *ti-dhitci* tadpole, *ti-dha* bird, *ti-aka* fish, etc. But this is by no means the rule, and the prefix may very well be left out; and furthermore the natives are conscious of its meaning "animal". The case is similar in Cuicateco, Mazateco.

In Zapoteco however the meaning of the prefix is quite below the level of consciousness; the prefix is not detachable. The semantema for "animal" is *ma'*. The *mb-* prefix is therefore a true morphema, i. e. a semantema which has lost its autonomy. In Mixteco the *ti-* prefix may still be considered an independent word preposed, a semantema. Thus while the Zapoteco animal gender gives the feeling of firmly rooted antiquity, the same gender in Mixteco appears a recent acquisition.

The phonetic similarity between the semantemas man *and* animal. — The word for "animal" is *ma'* (the vowel between English

"marsh" and "mat"); the word for "human being" is *me'* (the vowel between English "met" and "mat"). The distinction is therefore rather subtle phonetically, and as a matter of fact the foreigner finds it impossible to catch the difference in fast speech. And yet these are the two semantemas upon which, as morphemas, rests the whole burden of gender relation in the Zapotecan sentence! We will find this similarity repeated in every other dialect of Zapoteco. In the Valleys the two semantemas *beni* human, and *main* animal, (probably crystallizations of *be ni* human is, *ma ni* animal is) give rise to the mophemas *-v* 3rd. pers. human, and *-m* 3rd. pers. animal. In the Basin of Ixtlan we have *-vi* and *-va*. In the Basin of Yalálag, *-mé* and *-mè*. In Tehuantepec, *bé* and *bè*. And we shall find the same curious phenomenon in other languages of the Zapotekan group.

Now, it may appear not only curious but almost unbelievable that anything as important as class distinction should be expressed by morphemas so much alike phonetically. However, we have only to think of French, "il" and "elle", and English "he" and "she", to realize how common the phenomenon is.

DIALECT OF THE VALLEYS.

Geographical subdivisions of the dialect of the Valleys. — We have already mentioned the fact that the central valley of Oaxaca embraces in reality three valleys, one running north, one west, and one south, all three converging to a center where the town of Oaxaca lies. The first of these three valleys, the one from the north with Etla as its main pueblo, may be disregarded in this study: in most of the pueblos only Spanish is spoken to-day. Anyway it does not form much of a valley, being rather an upland slope, not very fertile, and thinly populated. It is not even regarded locally as a valley by the Oaxaqueños themselves. For them there are two valleys only: el valle chico and el valle grande. The first is the one which comes from the west, with Mitla (now a very unimportant pueblo near the famous ruins) at the further end, then Tlacolula, Teotitlan del Valle (not to be confounded with Teotitlan del Camino in the northern part of the State) built on ruins of temples that have never yet been excavated, Tlacochahuaya, Tule (famous for a gigantic cypress), and several other pueblos. The second is the one that comes from the south, with Ejutla, Ocotlan, Zimatlan, Zaachila (reputed to have been the capital of the Zapotecan kings), and other pueblos. This valley is literally dotted with pyramidal mounds that have never yet been investigated. Both valleys are very fertile and thickly populated: the people live in pueblos and cultivate the land according to an intricate system of semi-private, semi-communal ownership of land and irrigation, with very primitive plows and tools. The normal status in most pueblos, as regards language, is that most of the adult males can speak a rather broken sort of Spanish, but very few of the women can. A great many Spanish words and expressions have crept into the language and have been completely amalgamated, but this has not affected appreciably the structure of the language. It has sometimes been reported that each pueblo speaks a different dialect. There is just an element of truth in this: it has often happened that in the course of the evolutionary drift toward suffixation of the pronouns (which is one of the main points of the present study) two pueblos only a few miles apart have chosen different semantemas to express the third person "human". Thus Teotitlan makes use of *-ang* (derived from *ngiu* man), while Tlacolula a few miles away uses *-av* (derived from *ven* human being). The result is that an ordinary sentence sounds very differently in the two pueblos because although the root-words of which it is made up are practically identical in both of them, the pronominal endings are different, and these endings are necessarily very frequent in any sentence. Let us take for

example the sentence "he is at home, cutting wood", where the root-words are *tyugh* cut, *yah* wood, *lij* home. In Teotitlan: *la-ang ri-tyugh-ang yah lein lij-ang.* In Tlacolula: *la-av ri-tyugh-av yah lein lij-av.*

This, together with certain differences of pitch-tone, is sufficient to cause difficulties of understanding between two such pueblos. Otherwise there is very little difference between the language as spoken in any of the pueblos of either valley. But between the dialect of the Valleys and the dialects of the mountains, either northern or southern, the break is sharp. The man from the Valleys is unable to understand a running conversation between two mountaineers, although if they address him and speak slowly and carefully, the root-words are so similar to those of his own speech that he can understand the drift of their message quite readily.

The two varieties (or sub-dialects) of the Dialect of the Valleys, that of the Big Valley and that of the Little Valley, are therefore similar enough to be treated together in the present study. To them we have joined a third variety, that of the language spoken on the Isthmus of Tehuantepec. This has often been referred to as a separate dialect of Zapoteco proper, but it is practically identical with the dialect of the Valleys, except for the extraordinary degree of admixture of Spanish. The region of Tehuantepec is far removed from the center of Oaxaca. It is connected with it by the Río Tehuantepec and its valley. This forms a sort of long alley separating the Mixe in the north from the Chontal in the south. It may be presumed that a variety of the Valley dialect was spoken in it formerly, and perhaps even now. Most of the pueblos are reported to speak only Spanish, but we lack precise data.

The following are the abbreviations used in this study for the names of the different pueblos of either Valley:

Big Valley:		*Little Valley:*	
Can.	(San Martín de los Cansecos)	Gue.	Guelavía
		Mit.	Mitla
Coy.	Coyotepec	StaA.	Santa Ana
Eju.	Ejutla	Tla.	Tlacolula
Hux.	Huixtepec	Tlac.	Tlalistac
Már.	San Pedro Mártyr	Tlc.	Tlacochahuaya
Oco.	Ocotlan	Tn.	Teotitlan
Ozo.	Ozolotepec	Tul.	Tule
Zaa.	Zaachila		
Zim.	Zimatlan		
	Teh. Tehuantepec		

Pronominal forms. — (Pueblo of Teotitlan) [for exact phonetics and for pitch-tones see LANGUAGE, l. c.].

	INDEPENDENT	SUFFIXED
I	*naa*	*-a*
we (inc. and exc.)	*to-noung*	*-ung*
thou	*lui*	*-u*
thou (reverent.)	*yubyu*	*-u*
ye	*lui-tu*	*-tu*
he (human)	*la-ang*	*-ang*
he (animal)	*la-m*	*-m*
it	*la-ing*	*-ing*
they	*la'a-danh*	*-danh*

Note: The suffixed form *-ing* is only used as the second suffix, for the object "thing". There are two irregularities: 1° where the first person singular is the subject, its proper suffix *-a* is omitted, thus: I cut it, *tyugh-ing*; 2° in the case of the third person "human", both subject and object are combined into *-ni (-dninh* for "they"); thus: he cut it, *tyugh-ni.*

The foregoing are the forms for the pueblo of Teotitlan in the Little Valley. There are many variations throughout both Valleys (see LANGUAGE, l. c.). Only a few points of interest will be noted here:

1. The pronoun for "I" is practically the same everywhere (except for differences of tone).

2. the pronoun "thou" varies from *lu* to *li.* The former is predominant throughout the whole Zapotecan territory. It is the only form in all pueblos of the southern mountains and extends into the most southerly part of the Big Valley. It is the only

form in the Ixtlan district of the northern mountains, but while it is *le'* in most pueblos of the Yalálag district, (it is *lüe* however in Yalálag itself), the suffixed form is *-u*. In the Little Valley it oscillates from *lu* to *li*. In the Big Valley and in Tehuantepec it is predominantly *li*, but the suffixed form is *-u*. The form *lu* may therefore be regarded as the most fundamental.

3. The form *lüi-tu* for "ye" (i. e. "thou-ye") is less usual in most pueblos than the straight plural *laa-tu (laa* plural of the demonstrative *la)*. In Zaachila there is a remnant of the plural in *re* of the south: *laa-ra-d* (from *laa re tu)*.

The pronouns for the third person. — These are expressed in the same manner as in the dialect of the Southern Mountains by a combination of a demonstrative with the three morphemas for the three classes "human, animal, thing". The demonstrative in this dialect is always *la*, and is always prefixed to the morphema.

Class "human". — The morphema used in most pueblos is *vi* (or some such modifications as *ve, ev, av*, etc.), derived from the semantema *ven* human being. In combination with the demonstrative it becomes *la-vi*. In the Little Valley however some pueblos use *ang* (derived probably from *ngiu* male), which gives *la-ang*.

Class "animal". — In the Big Valley most pueblos simply agglutinate the semantema *mang* animal, to the demonstrative: *la-mang*. In the Little Valley the process of fusion is carried further and the semantema *main* is reduced to a mere *m*: *la-m*.

Class "thing". — The forms oscillate between *la-ni* and *la-ing*. The semantema for thing is really *ngwen*, but in most places has been replaced by the Hispanism *kosa*. There is therefore some ground for believing that there has been here some confusion with the verb *ni* to be. Observe also in this connection that the *na-* prefixed to all adjectives is often translated by the natives as either "thing" or "it is" (v. g. *na-ngees* translated either "black, black thing", or "it is black"). Observe furthermore that in some districts of the Northern Mountains the suffix for thing is *-na* (Ixtlan).

The trend toward suffixation. — We have already mentioned several times the fact that what makes the study of the dialects of Zapoteco so instructive is that they are at present caught in a drift of evolution toward the suffixation of the subject and also of the object to the verb. We have already found traces of this in the dialect of the Southern Mountains, and we shall find evidence of it again in the Northern Mountains. But it reaches its greatest development in the Valleys.

This suffixation is a natural result of the order: verb-subject-object. From mere juxtaposition the subject and object pass naturally into incorporation as mere suffixes to the verb (remember that in Zapoteco the verb is primarily an invariable stem, except for the temporal prefixes). This incorporation of the subject and the object as mere suffixes does not reach proper names of persons, animals, or things, like Pedro, dog, tree, etc. It reaches only their expression as pronouns: I, we inclusive, we exclusive, thou, ye, person, animal, thing. But, and this is important, it reaches both the subject and object at once. One might have expected that incorporation would affect the subject first, and after this was well established, the object. It seems however that the moment the drift toward incorporation started it took in at once all the elements of the sentence (reduced to its essentials of three monosyllables: verb, subject-pronoun, object-pronoun).

This appears to be the ideal scheme, although in practice there have resulted convergences of forms which led to misunderstanding and were therefore avoided by maintaining the independence of the object-pronoun. Thus in "I cut him", both subject and object are "human", and we should have according to theory: *tyugh-a-ang*. This in-

evitably becomes *tyugh-ang*. But this would also mean "he cuts". In ordinary speech therefore the difficulty is avoided by saying *tyugh-a la-ang* (maintaining separate the identity of the pronoun *la-ang*). On the other hand certain contingencies are naturally out of the question; things, for instance, cannot properly be the subjects of verbs, in Zapoteco.

The predicative-possessive treatment of person. — This is essentially the same in the Valley dialect as in the dialect of the Southern Mountains. The only difference is that instead of being merely postposited, the person which is the subject of the verb or the possessor of the noun, is in this dialect suffixed to verb or noun. This is however true only when the person is represented by a pronominal form. When the person is expressed by a personal or specific name (like Pedro, horse, etc.), the name is not suffixed but simply postposited as in the case of the dialect of the Southern Mountains: *tyugh-ang* he cuts; but *tyugh Bedth* Pedro cuts. The same rule extends to the case of the object: it is affixed as a second suffix only when represented by a pronominal form (*tyugh-u-ang* you cut him; *tyugh-u Bedth* you cut Pedro.)

Illustrations of the use of the pronominal suffixes:

I see him (a person)	*nya-a la-ang* (or *nya-ang* [rare])
thou seeest him	*nya-u la ang* (or *nya-ung* [rare])
he (pers.) sees him	*nya-ang la-ang* (or *nya-ang* [rare])
I see him (an animal)	*nya-a-m* or *nya-a la-m*
thou seeest him (an anim.)	*nya-u-m* or *nya-u la-m*
he (animal) sees me	*nya-m naa*
he (animal) sees thee	*nya-m liii*
he (animal) sees him (pers.)	*nya-m la-qy* (or *nya-m-qng* [rare])
he (animal) sees him (animal)	*nya-m la-m*
I see it	*nya-ing*
thou seeest it	*nya-u-ing*
he (pers.) sees it	*nya-ni*
he (animal) sees it	*nya-m-inh*

my home	*lij-a*
thy home	*lij-u*
his home	*lij-ang*
his (animal's) home	*lij-um*
its home	*lij-ing*

etc.

Number. — This is expressed very much in the same manner as in the dialect of the southern mountains. This is especially true of the Big Valley. In the Little Valley the *re* all, disappears and *jye* several, takes its place; but here it becomes a mere affix *dth* which may be either prefixed or suffixed to the noun: *dth-bek* or *bek-dth* several dogs; its use however is not very frequent. Exactly the same role is fulfilled in Tehuano by *ka*, and here it is regularly employed: *ka-beku* or *beku-ka* "dogs". In the case of the pronouns the *re* element and the *ka* element are combined with the pronouns themselves in various degrees of fusion according to the different pueblos (for instance "ye", the semantema for which is fundamentally *tu* in the Valleys, appears as *laa-ra-d* that-all-ye, in Zaachila; *lui-tu* thou-ye, in Teotitlan; *laa-ka-tu* that-several-ye, in Tehuantepec)[1]. The demonstrative *la* that (or "the") becomes regularly *laa* for the plurals of the pronouns. This was obtained several times as *la'a*, which leads to a surmise that the original form may have been *la-ka*.

The first person plural has the peculiarity in the Little Valley of being preceded by an element *to*. Thus: *to-noung* we[2]. This element is separated from the pronoun in the treatment of accidental possession: *to-cteny-ung-our*.

[1] As the suffixes for predication and possession are accordingly *-rad*, *-tu*, and *-katu*, it may easily be seen what a source of unintelligibility thereby arises between various pueblos.

[2] Repeated inquiries failed to reveal a distinction between inclusive and exclusive "we", except once when it was given as ending in *-ung* for the inclusive, and in *-unh* for the exclusive. Nasalized resonance in the first, and nasalized breath in the second.

The Tehuano dialect has the peculiarity of forming the beginning of a regular system of dual, trial, etc. For this, and for all other details, consult our article in Language, and also the pronouns in the Semantic List to be published later.

Diminutive. — In the Little Valley at least, the diminutive may be expressed by the suffix *-ę: beku* dog, *beku-ę* little dog; *yah* tree, *yagh-ę* little tree.

Negative. — The negative is expressed fundamentally by *ke* not. In the Little Valley this negative is always found combined with the demonstrative *ti* one (derived from *te*, derived from *tov)*, as *ke-ti* or *ket*. Furthermore the *ti* element is repeated after the ensuing verb, between it and the pronominal suffix: examples:

I do not know	*ket riyakbe-di-a*
there is no food	*ket-ti yet*
there isn't any	*ke-ti-ing*
there wasn't any	*ket ghu'u-di-ing*
he is not here	*ke-ti-ang*
he is not here (referring to an animal)	*ke-ti-um*
nothing (lit: not-one of-one-one)	*ke-ti c-te-ti*

Interrogative. — Expressed by the independent word *ci* what?, or by the element *la* either prefixed or suffixed to the verb (Teh.).

The temporal prefixes. — The temporal prefixes have been fully described for the dialect of the Little Valley by one of us in "Tone Patterns and verb forms in a dialect of Zapotek" (LANGUAGE, II, 4, December 1926).

The Gerundive. — The gerundive is expressed by the independent word *ni* of, followed by *ghal-* prefixed to the radical of the verb. Example: This is the wood to be cut.

yah re' na ni ghal-tyug-in
wood here is of (ger.)-cut-thing

The Reflexive. — The reflexive (when not expressed by the very nature of the verb [see our remarks on Voice in Zapoteco]) is expressed by *laghak* followed by the verb. There must be some connection between this and the verb form *ghak* to be, can.

Palatalization. — The phonetic phenomenon of palatalization so frequent in all the languages of this group, is in this dialect often associated with metathesis. Thus to sleep, (radical *asy-):* the Continuative is in Teotitlan *ka-yas-*, in Huixtepec *kya-sya-*.

Imperative. — The second person singular is expressed by the radical of the verb preceded by the same temporal prefix which is used to mark the Perfect in the verb in question. The second person plural is expressed by *ghul-* followed by the radical of the verb preceded by the same temporal prefix which is used to denote the Inceptive in the verb in question.

Thus for a verb like *-ni-* to make, which has the Perfect in *ba-* and the Inceptive in *ghu-:*

make it, thou!	*ba-ni-u*
make it, ye!	*ghul-ghu-ni-tu*

For a verb like *tyugh-* to cut, which has the Perfect in *ghu-* and the Inceptive distinguished by the absence of prefix, we have:

cut it, thou!	*ghu-tyugh-u*
cut it, ye!	*ghul-tyugh-tu*

Whatever the irregularities that a particular verb may follow in regard to the Perfect and the Inceptive, these irregularities are reproduced in the treatment of the Imperative. Thus, "to play" has the Perfect in *ghu-dzt-* and the Inceptive in *ki-t-;* these rather aberrant forms are reproduced in the Imperative: *ghu-dzut, ghul-kit.*

It is to be noted that the suffixed pronoun is often lacking in the Imperative.

The possessive affix c-. — Possession, when not of the essential type, is expressed fundamentally by *c*, which may be either prefixed, suffixed, or both at the same time, to the name of object possessed. Thus *c-bur*, or *bur-c*, or *c-bur-c* mean essentially that the burro in question is somebody's property. If it belongs to Pedro I say: *c-bur Bedth;* if it

belongs to me, *c-bur-a;* if it belongs to you, *c-bur-u*, etc. In practice it has come about that the proclitic *c* is used as a definite article: *c-bur* is *the* burro. (On the other hand *a* burro is more likely to be rendered by *bur nak* burro is, or burro can, [i. e. it is a burro, or it can (perform) as a burro])[1].

This *c-* is the same as the one in the expressions *cteny-a, cteny-u*, mine, thine, etc. These are ultimately derived from *c-te-ni-a* of-one-do-I, etc. These expressions have been set forth in the articles in LANGUAGE already quoted.

Voice. — The Zapotecan verb has been so reduced by attrition, and the remains of older forms and patterns are so irregular and isolated, that it is difficult to determine exactly on what basis the distinctions of voice were carried out. From what remains however, a certain feeling is obtained by those who study the language and especially who pay attention to the way in which the natives translate their idioms into Spanish, that the distinction in Zapoteco is not between transitive and intransitive, nor between active and passive, but rather between causative and reflexive, or to put it better still, between "self-contained" and "non-self-contained". The verb "to speak", for instance, is by its own nature non-self-contained; but under certain circumstances it may be circumscribed by the self, as when one speaks to oneself (in our languages we view this as reflexivity), and this is expressed in Zapoteco by a certain method, or at least was probably so expressed at one time. The evidence that remains are a different treatment of the temporal prefixes, certain sound-variations, the remains of a suffix in *-te*, etc. The verb "to accustom" is naturally self-contained, but it is very easy to make it transcend the limits of the self, as when one accustoms another person or animal to something. Thus for the native there is always the grand distinction between "to do oneself" and "to do another". To chop wood comes within the first class, strange as it may seem to us and our customary transitive-intransitive polarization; but to make some one else chop wood comes within the second class.

This fundamental distinction is very well exemplified by two verbs in Zapoteco which are exceedingly common, act somewhat as auxiliaries, and one of the two of which always gives the natives a great deal of difficulty in translating. These are the two verbs whose radicals are *-k-* and *-ni-*. The latter is easily translatable by "to make".The first may be translated by "to do", or "to be", or as the natives render it themselves: "to do oneself" (hacerse), or "can" (poder). For the Zapotecan mind there is no such thing as "to be" in our sense. Our concept of existence they conceive rather as the self-contained aspect of action.

Plurality expressed by sound variations within the temporal prefix in the verb. — There are a few vestiges of this in Zapoteco. Thus there is an element in *i* which appears sometimes in the 1st. pers. plural. [*xi-nwing* instead of *ghu-nwing* we load, *it-au-nwing* instead of *gh-au-nwing* we eat, etc.] Cases of this are however so few and rare that we are not allowed to do more than merely to surmise that these may be the remnants of a once active process in Zapoteco. [cf. Chocho].

Compounding and Pseudo-disyllabism. — In Zapoteco, as in all languages that incline towards monosyllabism, one has to guard against pseudo-disyllabism. Because of the phonetic similarity between many semantemas there arises a tendency to associate any semantema with some other one allied to it in meaning. Thus "hair" is always "hair [of the] head", "market-place" is always "in [the] market-place", "meat" is "meat cow", "lamp" is "light fire". The difference between this and compounding is that in true compounding one of the terms of the compound qualifies the other, changes its meaning, restricts or amplifies it, modifies it

[1] For the meaning of *nak* to be, can, see the paragraph on Voice.

in some way. In the pseudo-compounding of monosyllabic languages we have rather an intensification of the primary meaning.

The distinction is perhaps not a very significant one. In practice it is of importance in the determination of the true semantics of the language.

DIALECT OF THE NORTHERN MOUNTAINS.

Geographical subdivisons of the dialect of the Northern Mountains. — The mountains that lie to the north of the Little Valley of Oaxaca constitute two parallel basins. Their long axes run from north to south. These are known locally as "la cuenca de Ixtlan" and "la cuenca de Yalálag", from the names of the two most important pueblos. There is considerable difference between the speech of the two basins. They have more in common than either one has in common with the other dialects, but while there are resemblances between the Yalálag sub-dialect and the neighbouring Little Valley sub-dialect, the Ixtlan sub-dialect shows resemblances to the far removed dialect of the Southern Mountains.

There are enough differences between these two subdialects to deserve separate treatment in this study.

SUB-DIALECT OF IXTLAN.

This is the dialect which is usually meant in Oaxaca when one speaks of "el idioma serrano". The following is a list of the abbreviations used in this article for those of the pueblos for which we have records:

Ixl. Ixtlan (pronounced istlan)
Ixp. Ixtepexi (pronounced istepeẋi)
Lao. Lachatao
Ll. Llavesía
Lsr. Los Arroyos
Mgs. Macultianguis
Xs. Xaltianguis (pronounced ẋaltiąŋgis, local name *tsakwá*).

The independent pronouns. — There are variations from pueblo to pueblo, but we will give here the forms of Xaltianguis as being fairly typical:

	Independent form	Post-posited or suffixed form
I	*nete*	*-a* (*-te* occasionally found)
we (inclusive)	*ryuu*	*ryuu*
we (exclusive)	*netu*	*-tu*
thou	*lu*	*lu*, *-u* (rare)
thou (reverential)	*kwinu*	*-kunu*
ye	*li-bi*	*-li*
he (person)	*la-bi*	*-bi*
he (reverential)	*la-ye*	*-ye*
he (animal)	*la-ba*	*-ba*
it (thing)	*la-na*	*na*
they	*laa-ka-bi*	*-ka-bi*

These forms, when compared to those of the other dialects, deserve the following remarks:

1. While the suffixed form of the 1st singular is similar to that of the Valley dialect, the independent form is quite different. The variation *netu* for the "we exclusive", its suffixed form *-tu*, and the occasional suffixed form *-te* for the 1st singular, all point to *-te* as being the important part of *nete*. At least it has become now the important part consciously. On the other hand, the almost universal form *naa* for the first person, the very frequent association of this pronoun with *re'* here, as *naa-re'* in many pueblos of the Valleys, and the Zapotecan phonetic unstableness of *t*, *d*, *n*, *l*, *r*, which are all more or less interchangeable, all argue for *ne-* as the primitive element.

2. The pronoun for "ye" shows some variations. In Ixtlan itself it is sometimes given as *kwina-lu*, which is a combination of the reverential and "thou". The same thing happens in Macultianguis: *kwina-li* (*lu* thou). In most of the pueblos however it is *li-bi*, and the suffixed form is *-li*. The second element is probably the morphema "people" (you-people, just as we say you-all).

3. It is to be noted that the semantemas for "person" and "animal" are in this

dialect *ben* and *bye*. The semantema for "thing" *na* is the same as the morphema.

4. The reverential forms appear to be more developed in this than any other dialect of Zapoteco proper, although not as much as in the neighbouring Mixteco.

5. In the pueblo of Ixtlan itself, the object "thing" may also be expressed by *te-ni* one-thing.

The predicative and possessive treatment of person. — This stands half-way between the strictly isolating technique of the southern mountains, and the suffixation-fusion of the Valleys, as may be seen by a glance at the preceding table. Note that the pronouns for "we inclusive", "thou", and "thing' are simply post-posited; the suffix for "I" is truly fused (and probably directly borrowed from the Valley dialects); the other pronouns are suffixed with a certain amount of variation.

Examples: I cut a thing *tcu-a na;* thou cuttest a thing *tcu lu na;* I cut an animal *tcu-a-ba;* I cut a person *tcu-a-bi;* he (an older person) cuts him (a person of the same rank as the speaker) *tcu-ye-bi;* they cut a thing *laa-ka-bi* (or *laa-ka-ye* according to rank) *tco-ka-bi na;* my nose *jrine-a;* thy nose *jrine lu;* animal's nose *jrine-ba;* a person's nose *jrine-bi;* several people's noses *ka-jrine-ka-bi.*

Accidental possession. — This is treated fundamentally in the same manner as in the other dialects i. e. by an indirect treatment of person through the word "of", except that the word for "of" (the *cten* of the southern mountains, the *c-te-ny* of the Valley) is here *ke-ta,* and the morphema for "thing" *(kwan* in the southeast, *-i* or *-ya* in the southwest) is here an independent word *na.* The tendency toward fusion has however crept in here further than in the direct treatment of person as is shown in the following table:

mine	*ke-ta nete na* or *kye-ta na* or *kyeta* or *kya*	
ours (ex.)	*ke-ta netu na*	*ke-tu-a*
ours (in.)	*ke-ta ryuu na*	*ke-ryu-a*
hine	*ke-ta lu na*	*kwa* or *koo*
thine (rever.)	*ke-ta kwinu na* or	*ke-kunu-a*
yours	*ke-ta li-bi na*	*ke-lya*
his	*ke-ta la-bi na*	*ke-bya*
his (rever.)	*ke-ta la-ye na*	*ke-ye-a*
his (anim.)	*ke-ta la-ba na*	*ke-ba-ya*
theirs	*ke-ta laa-ka-bi*	*ke-ka-bi-a*

Number: Plurality is expressed by *ka* suffixed or prefixed, as in the other dialects.

Diminutive. — Expressed by the suffix *-to: beku-to* little dog, *ben-ni-to* child, *nula-to* girl.

Negative. — Expressed by *bittu-te,* which may be split:

nothing happened to me *bittu-ru'-a-te-a*
(nothing-lie-I-one-I)
nothing happened to you *bittu-ru'-u-te lu*
(nothing-lie-thou-one-thou)

Temporal prefixes. — These are generally comparable to those of other dialects: the Perfect is expressed by either *u-* or *be-,* sometimes *ghut-;* the Continuative by *r-(ri-, ru-,* or *ra-);* the Inceptive by *i-, k-, ghu, gha-,* etc. These temporal prefixes agree more closely with those of the Valley dialect, than any other dialect, as may be seen from the following list in which the same classification has been followed as in LANGUAGE, II, 4:

Type A.	Radical	Perfect	Continuative	Inceptive
to cut	*tcu*	*u-*	*ri-*	*i-*
to throw	*ye*	*uʷʳ-*	*ri-*	*k-*
Type B.				
to give	*e*	*be-*	*ru-*	*ku-*
to give oneself	*eto*	*be-*	*rwe-*	*kwe-*
to do	*ni*	*be-*	*ru-*	*ghu-*
to put	*dhua*	*be-*	*ru-*	*u-*
to kill (cf. die)	*ti*	*be-*	*ru-*	*gghu-*
to yell	*edzi(ya)*	*u-r-*	*ri-be-*	*kw-*
Type C.				
to bring	*-(t)ile*	*0-*	*ru-*	*ki-*
Type D.				
to lie	*'a*	*ghut-*	*ra-*	*gha-*
to die	*ti*	*ghut-*	*ra-*	*gha-*
to eat	*o*	*ut-*	*r-*	*gh-*

Anomalous:	Radical	Perfect	Continuative	Inceptive
to take	*i*	*jr-*	*rdh-*	*th-*
to give	*itaba*	*jr-*	*rdh-*	*th-*
to fear	*tsi, tsini*	*gghu-*	*ra-*	*ggha-*
to boil	*tiye*	*bi-*	*ri-*	*dhye-*
to go	*a', ia*	*ghu-*	*dh-*	*ts-*

Example: It will cost you ten pesos in the market.

wa-dhaka ni lu na tsi beju le sxia
Inc.-cost of thou thing ten peso in market

SUBDIALECT OF THE BASIN OF YALÁLAG.

This dialect is often referred to in Oaxaca as "idioma del Rincón", this region being called the "corner", because of its remoteness.

Caj. Cajonos
Cua. Cuajimoloyas
Lxp. Laxopa
Yal. Yalálag.

Pronominal Forms.

	Independent	Suffixed
I	*neta*	*-na, -da, -a*
we (incl.)	*dzyo*	*-dzu*
we (excl.)	*netu*	*-tu*
thou	*le*[1]	*-nu, -du, -u*
ye	*le*[2]	*-le*
person	*le'*[3], or *ben-na*	*-ne'*
animal	*le-b*	*-eb, -b*
thing	*leę*	*-ę'*[4]

Predicative and possessive treatment of person. — This is quite comparable to that of the Little Valley

he (a person) saw me	*b-le-ne' neta* Pf.-see-he I
he (an animal) saw me	*b-le-ev neta*
he (a person) saw him (a person)	*b-le-ne' le'*
he (an animal) saw him (a person)	*b-le-ev le'*
he (an animal) saw him (an animal)	*b-le-ev le-v*

[1] Tone rising from middle to high.
[2] Tone rising from low to high then falling to middle.
[3] Tone middle, vowel very open.
[4] Used only as second suffix (for the object). Its effect is to nasalize the vowel of the first suffix and to end in a glottal catch. Thus: I cut thing *tsugh-ę'*.

I saw him (a person)	*b-le-da le'*
you saw him (a pers.)	*b-le-du le'*
I saw him (an animal)	*b-le-da-v*
I saw it	*b-le-dę'*
you saw it	*b-le-du'*
he (pers.) saw it	*b-le-nę'*
he (anim.) saw it	*b-le-v leę'*
my home	*lij-a*
your home	*lij-u*
our home (inc.)	*lij-dzu*
our home (exc.)	*lij-tu*
his home (animal's home)	*lij-ev*
etc.	

Accidental possession. — Expressed in the same manner as in the other dialects. The morphema for "of" is here *tse*. It is used in more direct fashion (without the accompaniment of a demonstrative or of the verb "to be")[1]

my house	*yu' tsi-a*
our house (inc.)	*yu' tse dzyo*
our house (exc.)	*yu' tse netu*
thy house	*yu' tsi-u*
your house	*yu' tse lee*
his house (pers.)	*yu' tse ben-na* (or *tse le'*)
his house (anim.)	*yu' tse byen-na* (or *tse lev*)

It is interesting to note the different degrees which affixation has reached.

Number. — The plural in *ka-* or *-ka* found in the other dialects, exists only very sparingly in this dialect. On the other hand the verb often bears a prefixed *si-* or *s-*, in lieu of temporal prefix, when the subject is plural.

Definition. — Although the possessive prefix *c-* is used in this dialect it is never employed as a means of definition. Instead, a suffix *-na* is used: *tu beze'* one fox, *beze'-na* the fox. This *-na* is either the verb "to do, to be", or the word "thing" (compare the *na-* prefixed to adjectives in the Valley dialect, and the suffix *-na* for "object thing" in the dialect of Ixtlan). In the Yalálag dialect the word for "thing" is *de-na* (cf. *te* derived from *tob* — one, in the Valley).

[1] It is almost identical with the corresponding forms in the neighbouring Chinanteco language.

Reflexive. — A peculiarity of this dialect is the presence of a suffix *-cka* to the verb to denote either reflexiveness, the subjunctive mode, or the future of eventuality.

Negative. — Expressed by *bitwi-dee*, which corresponds to the *bittu-te* of the dialect of Ixtlan. The important element appears to be the *bi* as shown from the form *bi ghak* impossible (lit. not can).

Conditional. — The conditional is expressed by the use of the independent word *tci* when. "When" in the Past is expressed by *kate*.

Temporal prefixes. — These are conformable to the forms found in the other dialects: the Perfect is either *b-* or *wu-*, or some variant. The Continuative is either *dz-* or *c-* (this is a link with the southeastern forms), or *n-*. For the Inceptive there are a number of forms: *wu-*, *ʷu-*, *ʷghu-*, *ghu-*, *gu-*, *gha-*, *ts-*, *yi-*, *e-*, and absence of prefix.

The verb forms of this dialect do not seem to be classifiable according to the same types as we have worked out for the Valley dialect or in the Basin of Ixtlan. In general it may be said that they have suffered a greater degree of attrition than in the latter.

	Radical	Perfect	Continuative	Inceptive
to pet	*ji*	*b-*	*dz-, n-*	*u-*
to give	*nejrw*	*b-*	*c-*	*eu-*
to pack	*ua'a*	*bi-*	*dz-, n-*	*g-*
to weave	*ia*	(irregular throughout)		
to be hungry	*tun*	*wu-*	*c-*	zero, *e-*
to say	*n* (irreg.)	*wu-*	*j-*	zero
to cut	*tsugh*	*p-*	*c-*	*ghwu-*
to spin	*lgh*	*ghu-*	*dzun-*	*a-*
to drink	*gha'*	*we-*	*dze-*	*ye-*
to lift	*as*	*buya-, wuya-*	*dza-*	*ts-*
to tell	irregular throughout. (radical *-p-liz-*)			
to stick	*ra*	*b-*	*c-*	*wu-*
to grab	*sya*	*wujria-*	*dz-*	zero
Type A.				
to speak	*n(y)*	*ᵍʰwut-*	*j-*	zero
to lift, to get up	*(y)as*	*uw-*	*dz-*	zero
to arrive	*jin*	*b-*	*dz-*	zero
to fall	*jrup*	*b-*	*dz-*	zero
to fear	*jyeb*	*b-*	*dz-*	zero, *e-*
to finish	*yuj*	*be-*	*dze-*	*yi-*
Type C.				
to be fond of	*dzulaj*	*be-*	*dz-*	*e-*
Type D.				
to eat	*aw*	*ᵍʰwut-*	*dz-*	*ggh-*
to see	*wiy* / *le*	*b-le*	*dzgh-wiy*	*wiy*
to sleep	*tas*	*b-*	*c-*	*e-*
Type B.				
to run	*jungh*	*b-*	*dz-*	*wu-*
to yell	*ejy*	*wu-dz-ej*	*dz-be-ej*	*kw-ejy*

(cf. the exactly similar criss-cross use of prefixes in the other dialects in the case of the same verb, viz. Pf-Cont. for Perfect, Cont.-pf. for Continuative, and Inceptive straight.)

to go: Perfect:	I went	*u-ya'*
	you (sing.) went	*u-yegh-u*
	he went	*u-yegh-e'*
	etc.	
Incept.	I am going	*tca'a*
	thou art going	*tcegh-u*
	he is going	*tcegh-e'*
	etc.	

Chinanteco.

Introductory. — Chinanteco is spoken over a comparatively large area in the northeastern part of the state of Oaxaca. This area may be divided ethno-ecologically into two: High Chinantla and Low Chinantla. The first is a mass of rough, cold and almost impenetrable mountains, rising even above the high ranges of the Zapotecan serranías. The population appears to be concentrated in a few pueblos the most important of which is Yólox. The second lies within the tierra caliente: hot, tropical, low-land jungles divided by large meandering rivers that flow into the Atlantic. The population of this area is less highly concentrated and there are occasional isolated habitations between the main pueblos of Yetla, Valle Nacional, Ja-

catepec, Chiltepec, Ojitlan, Usila, etc. One would except to encounter two well differentiated dialects but as a matter of fact there seems to be very little difference between the language spoken in the High Chinantla and that of the Low Chinantla. Our material was recorded for the former at Yolox, for the latter at Yetla.

Our main informant was Manuel García Lagunas. This man's mother was Chatino, his father Zapoteco. He himself was born in Yetla and grew up in Yolox. This is a good example of the amount of mixture which exists in this region which facilitates linguistic borrowing.

Chinanteco has often been classed as forming a linguistic family all by itself. As a matter of fact it is not more divergent from Zapoteco proper, semantically, than Mixteco, Chocho or Mazateco. On the other hand, morphologically, it is constructed on the same basis of monosyllabic isolatism as all the other languages of the Zapotekan group. Inasmuch as the characteristic features of this structure have already been described at length, both generally, and in the case of Zapoteco proper, we will limit ourselves in the present study to the characteristics peculiar to Chinanteco.

In the following treatment of Chinanteco we follow essentially the same plan that we have followed in Zapoteco. Each section must therefore be referred to the corresponding ones in the several dialects of Zapoteco. Furthermore we have limited ourselves to pointing out only that which is different in Chinanteco from Zapoteco; the reader must take it for granted that the rest is the same. While Chinanteco is not difficult to describe by itself, its relation to the Zapotekan structure is very difficult to expound in a short and clear way.

We have found it impossible to do away in this section with the intricacies of phonetics and tone marks. Without them Chinanteco would be reduced to nothing.

PRONOMINAL FORMS. (Pueblo of Yolox).

	Independent forms	Suffixed forms
I	*ḥnɛ́*[a]	*-nà*
we inclusive	*ḥnǫ́*[y]	*-ná*[1]
we exclusive	*yŏ*[2]	
thou	*nɨ́*	*-nì*
ye	*ʾná*	*-ná*
he	*ín-dɔ̀*[3] or *é-dɔ̀*[c]	*-nì* or *-a*, or *-n* or *-rĕ*

Predicative treatment of person. — This can be reduced essentially to the same type as in Zapoteco proper. Is has however a special twist of its own. The normal order is, as in Zapoteco, verb (or possessed noun), subject, object. Chinanteco however is different from Zapotoco in the following manner:

1. If the object is animate, then the subject is joined to the radical in the form of a pronominal suffix: *hɨ́-nà dzì* see-I dog, *hɨ́-nù dzì* see-thou dog; *hɨ́-nà ín-dɔ̀*[c] see-I him, *hɨ́-nì ín-dɔ̀*[c] see-he him.

2. If the object is inanimate, then the subject is not suffixed to the radical but is expressed by means of a tonal change in the radical: *hɨ̌* *ʾmá* see-I tree, *hɨ̂* *ʾmá* seest-thou tree, *hɨ̋*[1] *ʾmá* see-we tree, *hɨ̀* *ʾmá* sees-he tree, etc.

The tonal changes of the radical are as follows:[4]

I rising from middle to high ˇ
we rising from low to high then falling to middle and held level for a prolonged period ᵛ
thou falling from high to middle ˊ
ye falling from high to low ˆ
he, they low; the vowel is brief and cut short by a glottal catch. ʾ

The foregoing description of the treatment of person applies very well on the whole, but

[1] Tone falling from high to low, then rising to middle and held level for a prolonged time.

[2] Tone rising from low to middle, then held level.

[3] *-dɔ̀*[c] is a demonstrative. Sometimes *iŋ-la*, or *iŋ-ba*, sometimes both; *in-dzɛʾ-la* that person.

[4] This is the pattern followed by the majority of verbs. Some verbs however follow a different pattern. It is possible that with enough material one could establish certain verb classes according to the tone-pattern followed.

that it is not the original Chinantecan system, will appear in the subsequent sections.

Essential Possession. — We have seen how in Zapoteco proper, in the case of essential possession, the name of the thing possessed (nose, arm, father, home, etc.) is treated as if it were a verb: i. e. the pronoun which represents the possessor is directly postposited or suffixed to it just as if it were the subject. This is not the case in Chinanteco: instead, the noun possessed is submitted to the same tonal changes as the verb when the object is inanimate. Thus: my foot, thy foot, etc., are all expressed by the same word but in different tones.

my	house	*nǎ́*
thy	house	*nā̀*
his	house	*nà'*
our	house	*nă̄*
your	house	*nâ*
their	house	*nà'*

Furthermore, in Chinanteco, not only inanimate possessed objects, like foot and home, are treated this way, but also animate objects like father, brother, horse, etc. We begin to suspect therefore that the treatment of person by means of tonal changes in the radical of the verb (or of the noun possessed) is the original Chinantecan method. In other words, in the original Chinanteco, there is no consideration of the object, nor of its gender (whether animate or inanimate). Instead, possession and predication are regarded as a direct relation between radical and the person inevitably related (the subject, in the case of a verb; the possessor, in the case of a noun). This person is expressed by means of tonal changes. The consideration of the gender of the object must have come as a new development (perhaps borrowed from Zapoteco, perhaps originating recently in Chinanteco, then borrowed and elaborated by Zapoteco). It was adopted in predication, the animate gender being expressed by suffixes that resemble the Zapotecan ones.

It is reasonable to expect that the new treatment (according to the animate or inanimate gender of the object) would speedily extend to the essential possession. For, although there is here no object involved, it is rather natural to confuse the possessor with the object.[1] And since the possessor is usually a person or an animal, the "animate" treatment might be extended to them. And indeed it is also found there occasionally: we have several examples in our material of words like "brother" which are conjugated like the verb with animate object: *jru-na* my brother, *jru-nu* "thy brother", etc. That these are in the minority is an argument in favour of our theory.

Accidental possession. — This is expressed as in Zapoteco by means of a word equivalent to "of", or rather "belong". This, in Chinanteco, is *kye'*. In Chinanteco however, it is not placed before the name of the object possessed, but after it. Now, we would expect, if the treatment according to gender of the object were an ancient and well established feature of this language, that this word *kye'* should receive either the "animate" treatment (by suffixes), or the "inanimate" treatment (by tonal changes), according to the gender of the object of accidental possession. As a matter of fact we find a confused mixture of both. The forms are as follows, irrespective of the gender of the object possessed:

it is mine	*kyé'-à* or *kɬà*
it is ours (incl.)	*kɬ'* or *kyé'-nǫ̂'*
it is ours (excl.)	*kyé'-yĭ̂*
it is thine	*kɬ'ɬ* or *kî*
it is yours	*kyé'-ná*
it is his	*kyé'-à* or *kyé'-à-nì* or *kyé'-án-dò*

Thus: my dog = *ín dzɬ là kɬà* (he dog here mine)
my house = *é nû là kɬà* (it house here mine)

Voice. — It is natural to expect that reflexivity and the passive would be expressed by the animate gender treatment since the object is normally a person or an animal.

[1] Cf. French: son père, sa mère.

Thus: *hī-na* I see myself, or, I am seen, *hī-nu* thou seest thyself, or, thou art seen, etc. It is to be noted however that the object is not explicitly mentioned, but merely inferred to be the same as the subject because of the absence of an explicitly named object.

There is however a class of verbs like "to go, to run, to speak, to sit", etc., which naturally lack an object. These are the verbs which in some languages are called neuter or intransitive. We find that in Chinanteco these verbs are subjected to either "animate" or "inanimate" treatment. The inanimate treatment is, according to our hypothesis, the original Chinanteco system. The animate treatment is easily explainable by analogy with the reflexive, as happens in many languages (notably in Spanish and French: "irse", "venirse", "s'asseoir", "se dire", etc.).

The temporal prefixes. — These are just two, and very clear: *ka-* for the Past, *ni-* for the Future[1]. These are applicable to any verb in the language, in either animate or inanimate treatment. They correspond exactly to the English words "did" and "will", and give just as little the feeling of being affixes, except that they are never found independently. All this points to their being a recent development.

Word-order: In Chinanteco the fundamental order is qualifier after qualified: mare is "horse female"; wise man, "man wise"; shore, "border river"; wooden horse, "horse wood"; etc.

Compounding: The limits of compounding are notoriously hard to define. It begins in the habitual association of two words, one of which necessarily qualifies the other. Then the consciousness of qualification disappears and the two words are felt as a compound of two equal parts. Finally the consciousness of separateness disappears and the word is felt as a single entity.

[1] The tones of *ka-* and *ni-* are variable. In a general way they are in contrast to the tone of the verb.

On the other hand it is also well-known that monosyllabic languages are in the habit of associating two separate words having more or less the same meaning, in order to avoid the confusion which naturally results in all monosyllabic languages from so many words being alike phonetically. Thus: "eye-see" for eye (or "eye-face"), "see-look" for to see, "hand grab" or "take-grab" for to take, etc. [This leads sometimes to a complete shifting of the original meaning from one to the other semantema, and must be reckoned as an important factor in the rapid semantic differentiation of monosyllabic languages].

This is precisely what we find in Chinanteco. One is puzzled to decide whether the hyphen ought not to be removed in the following examples:

head	*mon-gi*	i. e. bone-head
hair	*hnyü-gi*	hair-head
eye	*mi-ni*	eye-see
eyelash	*hnyü-mi-ni*	hair-eye-see
turkey	*tu-hmi'*	chicken-wild
otter	*dzi-hming*	dog-water
iguana	*kö-koo*	lizard-great
carpenter	*tö-'ma*	craftsman-wood
cobbler	*tö-möng-loo*	craftsman-sole-skin
hat	*dze-lo-gi*	man-on-head

It is also well to bear in mind in the investigation of monosyllabic languages, that unless the informant is blessed with a natural gift for linguistic feeling he will never trouble to point out such etymologies.

We may therefore say that Chinanteco has developed compounding out of word-order, but has failed to develop affixation out of word-order.

Sound-variation: There are a few cases like *hmį̄ᵑ* water and *hmį̄'* rain, (the only difference between these two is that the nasalized unrounded *u* vowel is followed in one case by nasal resonance, while in the second case it is cut short by a glottal stop) where sound-variation fulfills a derivational function, but they are so rare that the process

cannot be called characteristic of the language. Sound variation is however a regular and integral part of the "animate" system of conjugation described above. If we assume that the true semantema of a verb is the one that appears in the "inanimate" conjugation, then when such a verb passes over into the animate conjugation the radical of this verb undergoes often (but not always) a sound variation.

	Radical for the inanimate conjugation	Radical for the animate conjugation
to find	*gyï*	*gye*
to play	*koo*	*ka*
to make	*hmea, hmǫ*	*hmą*
to heat	*gyï*	*gyea, gii*
to eat	*gï*	*ku*
to take	*sǫ*	*sa*
to do	*li*	*li*
to bring	*to*	*ta*
to run	*kwį*	*kwï*
to fix	*ï*	*i*
to go	*gwoo*	*gye*
to see	*mǫ*	*ma*
to say	*faa, foo*	*fï*
to gather	*kąŋ*	*kï*
to burn	*hǫŋ*	*ha*

etc.

Ex: I see a tree *mǫ̌ 'má*
I see a dog *má-nà dzɨ*

he eats tortilla *gɨ̀' ɨ*
he devours a dog *kú-nì dzɨ*

You burn wood *hǫ́ŋ 'má*
You are burning (yourself) *há-nù*

Prosody: It need hardly be pointed out that tone and quantity play an important role in Chinanteco. And as may be expected when tone and quantity are present, stress is absent.

It is necessary, when treating of prosody as a grammatical process, to distinguish between its semantic and its morphological value. The same phonema *fï* means several different things in Chinanteco: *fḯ* means "poor"; *fï̋* "village"; *fï̌* "lazy"; *fï̋́* "raw"; *fï̀* "road". The tone in all these cases is an essential part of the semantema. It really has nothing to do with grammar, however much it may be necessary to indicate it in the dictionary.

But the same phonema *fï* in the sense of "road", may mean I travel, you travel, he travels, etc, according to the tone. Similarly in the sense of "village" (the context undoubtedly serves to indicate the primary meaning) may mean "my village", "thy village", "his village", etc., according to the tone. In these cases tone is not a matter of semantics but of morphology.

Even when morphological, it becomes important to determine whether tone expresses a derivational or a relational concept. We have one single example in our material of the use of tone as a strictly derivational device: *tù-ɧmɨ̀'* chicken-wild, means "turkey": *tù-ɧmɨ̂'* means "a little turkey" (the difference appeared to be about a tone and a half).

Number. — Number is not expressed in Chinanteco by any grammatical device, except in the single case of the suffix *-rö* for the third person plural in the animate conjugation.

Idiomatic Expressions. — Monosyllabic-isolating languages are apt to make an extensive use of idiomatic expressions: several words arranged in a certain order may acquire a meaning which is clear to the natives but may sound extremely farfetched to the foreigner. This is a necessary result not so much of monosyllabism as of its corollary: the usually weak development of derivational concepts. Chinanteco abounds in such idiomatic forms. "To make work for oneself" *(hmea-ni ta)* = to need; "to eat tortilla work morning" *(gï i ta 'a)* = lunch; "do sit sand" *(lï sea too)* = beach; "the there day right" *(le hii hming jröng)* = with success [i. e. "hasta donde tiempo parejo" as my informant put it].

Idiomatic expressions are much less abundant in Zapoteco, even in the strictly monosyllabic dialect of the south. This may perhaps be taken as another indication that monosyllabism is a more ancient feature in Chinanteco than in Zapoteco.

Chocho.

Introductory. — Hitherto there has been a certain amount of confusion in the application of the term Chocho. As here used it applies to the people of a small district in the northwestern part of the State of Oaxaca which centers around the pueblo of Coixtlahuaca. There is a small colony of these people established in the southern quarter of the town of Oaxaca, and it is from them that our material was obtained. They call themselves, in Spanish, Chochos. We have never heard the term Popoloco applied to them. In their own tongue they do not seem to have any name for themselves as a tribe or nation, aside from *jru ngin-djye* "people [from] Coixtlahuaca". The following were given by them as the main pueblos in their country: Coixtlahuaca, Tepelmeme, Nativitas, Tequixtepec, Suchixtepec, San Antonio Abad, Tlacotepec. Our best informants were Pedro Miguel and his wife, both from Nativitas.

Independent Pronouns. — (There are, properly speaking, no pronominal affixes in Chocho).

I	*haa* [tone rising from middle to high, about two and a half tones]
we [both exclusive and inclusive]	*hii* [same tone as "I"]
thou or ye	*haa* [tone rising from low to middle, about one and a half tone]
he [without distinction of gender or number]	*zoa* [tone rising from low to high, about three and a half tones]

There are several points to be especially noticed:

1. The great importance of tone. This is the only factor which distinguished the first singular from the second person.

2. The plural of the 1st person is distinguished from the singular by sound variation (change of *a* to *i*).

3. The absence of classes in the third person. We shall see later on that the two classes "animal" and "human" have been recently introduced into Chocho. Accordingly the forms *zoa-ri* he-human, and *zoa-ba* he-animal, sometimes occur, but they are not usual. (For the origin of the semantemas *ri* and *ba*, see the paragraph on classes of nouns).

Temporal prefixes. — Before attempting a description of the predicative treatment of person in Chocho it is necessary to outline the system of temporal prefixes because they are involved in the treatment of person.

There are three aspects: Perfect, Continuative, and Inceptive. They are used in the same manner as in Zapoteco. They are expressed by prefixes which also correspond to the Zapotecan prefixes. They are fundamentally: *be-* or *kwe-* for the Perfect; *de-* or *ded-* for the Continuative; *ze-* or *tse-* for the Inceptive. The above may be considered the normal forms. Less than half of the verbs which are not too irregular differ from the above in having *bi-* or *kwi-* for the Perfect, and *zi-* or *tsi-* for the Inceptive (the Continuative remaining *de-* or *ded-*.[1])

All of the above forms undergo a vocalic sound-variation if the subject of the verb is plural. They become: *bo-, kwo-; do-, dod-; zo, tso-*. At least this is the normal case. There are very few verbs however which obey this rule consistently for the three aspects. The majority of verbs obey it in the Continuative. A fair proportion of the verbs disregard it in the Perfect and the Inceptive, these two tenses usually going together. Other verbs follow it or disregard it. Similarly, most of the verbs undergo a vocalic sound-variation to *i* in the prefix, for the 3rd person sing. (See example of paradigm further on).

Verb stems. — The great majority of verb-stems in Chocho are monosyllabic. The few that are disyllabic are probably compounds.

All verbs (with a few exceptions) end in *a* or (less frequently) *e*. This terminal *a*,

[1] The *d* in these two cases is really closer to the fricative (interdental) than to the plosive.

however, undergoes a sound-variation to *i* for the 1st person plural [cf. the similar variation for the independent pronoun "we"]. (See example of paradigm further on.)

Predicative treatment of person. — We are now in a position to describe the treatment of person in Chocho. It does not involve any suffixation of pronominal forms, except that the two morphemas *-ri* and *-ba* for "human" and "animal" may be (and are usually) suffixed for the third person. But they are clearly of recent acquisition. The treatment of person is based essentially on two grammatical processes: tone and sound-variation.

1. *Sound-variation:* We have described this in the two preceding sections, and we may now restate as follows. Plurality is indicated for all three persons by a vocalic sound-variation in the temporal prefix. Plurality is indicated further in the first person by a vocalic sound-variation in the radical. The third person is characterized by vocalic sound-variation in the temporal prefix.

2. *Tone:* We have seen that there are three tone patterns that distinguish the independent pronouns. Similarly for the verbs: there are three main tone-patterns: high for the first person, low for the second, and for the third a system of tone-plays around the middle tone as center. The tone-pattern involves the temporal prefix as well as the radical, and the temporal prefix for the Continuative is often reduplicated in the form of *ded-* or *dede-*. Thus, although the great majority of verbs have monosyllabic radicals, the whole verb form including the temporal prefix is usually disyllabic, sometimes tri-syllabic, rarely quatri-syllabic. The result is a system of tone-patterns which are long to describe, but easily felt. In general (there are exceptions), the patterns are as follows:

	Disyllabic	Trisyllabic	Quadrisyllabic[1]
1º person	*h-h*	*h-m-h*	*h-m-m-h*
2º person	*l-l*	*l-m-l*	*m-l-l-m*
3º person	*h-l*	*h-m-l*	*h-l-h-l*

[1] *h* stands for high; *m* for middle; *l* for low.

Here are some of the variations:

	Disyllabic	Trisyllabic	Quadrisyllabic
1º person		*h-h-h*	*h-m-h-h*
2º person		*l-l-l*	*m-l-m-m*
3º person	*l-l*	*m-m-m*	
		h-h-l	
		l-h-m	

Example, verb "to have", "hold", "get", Radical: *nda.*

	Perfect	Continuative	Inceptive
I	*bé-ndá*	*dé-ndá*	*zé-ndá*
we	*bó-ndí*	*dó-ndí*	*zó-ndí*
thou	*bè-ndà*	*dè-ndà*	*zè-ndà*
ye	*bò-ndà*	*dò-ndà*	*zò-ndà*
he	*bí-ndà*	*dí-ndà*	*zí-ndà*
they	*bó-ndà*	*dó-ndà*	*zó-ndà*

The predicative treatment of person therefore in Chocho, is mainly based on tone, as in Chinanteco. The suffixation of pronominal morphemas has made very little progress, being exhibited only in the recent acquisition of *-ri* and *-ba* to differentiate the two classes (animal and human) in the third person. On the other hand, sound-variations of the temporal prefixes recall the traces of a similar process in Zapoteco.

Possessive treatment of person. — There is no distinction between essential and accidental possession, all possession being of the essential type. By this we mean that when a noun is related to a person by possession, the person is expressed directly in the noun possessed, by treating it in a manner very similar to that used in predication. The treatment however is not exactly the same as will be seen presently.

The fundamental scheme is to suffix the following suffixes to the radical without changing the tone of the radical:

I	*-ná* or *-á*
we	*-nyí*
thou and ye	*-à*
he	*-e* or *-i* or none (tone variable)

[If the radical of the noun ends in a consonant, a vowel, usually *a* or *e*, is intercalated for euphony in the first person singular and plural.]

Examples:

	home	thing	hand	horse	pueblo
my	*ndú-ná*	*dí-ná*	*rhá-ná*	*cì-ná*	*càd-éná*
our	*ndú-ní*	*dí-ní*	*rhá-ní*	*cì-ní*	*càd-éní*
thy	*ndù-à*	*dí-à*	*rhá-nà*	*cì-à*	*càd-à*
his	*ndú-è*	*dí-è*	*rhá*	*cì-ì*	*càd-è*

In many nouns, especially those of body-parts, there is a tendency to modify the tone of the radical according to a pattern that is very similar to that of Zapoteco of the valley, thus:

	head	foot	mouth	clothes
my	*kù-á*	*zìx-á*	*jrù'-á*	*tùt-éná*
thy	*kú-à*	*zíx-à*	*jrú'-à*	*tút-à*
his	*kú*	*zíx-ì*	*jrú'*	*tút-è*

Furthermore, just as in the case of predication, the morphemas *-ri* and *-ba* for "person" and "animal" are usually suffixed to the 3d person. Ex: *kú-rì* his head (of a person), *kú-bà* his head (of an animal); *ndù-é-rì* or *ndù-é-bà* his home etc.

A possessive particule like "of" does not exist in Chocho.

Voice. — The only indication of voice in Chocho is that some of the "neuter" verbs like "to fall", "to die", etc. are compounded with the verb "to be". Now, the verb "to be" follows a slightly different pattern:

	Indefinite	Perfect	Contin.	Incept.
I	*má*	*kú-má*	*tú-má*	*tsú-má*
we	*mí*	*kú-mí*	*tú-mí*	*tsú-mí*
thou ye	*mì*	*kù-mì*	*tù-mì*	*tsù-mì*
he	*mè* (or nothing)	*kù*	*tù*	*tsù*

Thus: I am the Presidente *hàá présidénté má*
thou art the Presidente *hàà prèsidèntè mì*
he is the Presidente *zòá présidéntè*.

It is of interest to note that in Chocho we encounter the same association of "to be" and "can", which we find in other languages of the Zapotekan group. In Chocho the latter is expressed by the radical *ki*,

	Perfect	Contin.	Incept.
I	*kù-kí*	*tù-kí*	*tsù-kí*
thou	*kù-kì*	*tù-kì*	*tsù-kì*
he	*kù-kì*	*tù-kì*	*tsù-kì*

Example of compounding of a neuter verb with "to be": [Verb to fall. Radical: *-the-]*

I fell	*bà-thé-má*
we fell	*bò-thé-mí*
you fell sing.	*bà-thè-mì*
ye fell	*bò-thè-mì*
he fell	*bà-thè*
they fell	*bò-thè*

On the other hand certain ideas which would be expressed in our languages by a neuter verb, are expressed in Chocho by the possessive construction. Thus, I am sick, is "my sickness" *nì-ná;* thou art sick *ní-à;* he is sick *ní-è*.

Irregular verbs. — A good many verbs are irregular in Chocho, although they always conform to the general type in a certain way. The limits of this article do not allow us to take up this subject here.

Classes of nouns. — We have seen that classes are expressed predicatively and possessively in Chocho by the two suffixed morphemas *-ri* and *-ba* for person and animal, which have all the appearance of being recent developments.

Nominally, we find the class "animal" expressed in Chocho in the following way: the names of animals nearly always carry the morphemas *u* or *jri* as prefixes: *u-nya* dog, *u-ca* chicken, *u-jyu* ant; *jri-nda* fox, *jri-lobo* wolf, *jri-rana* frog [sometimes both prefixes are combined: *u-jri-hna* deer, *ucrtisa* coyote, *uj-nda* bull, *uj-ndo* cat]. The *u-* is reminiscent of the Zapotecan *m-* or *mb-* prefixed to the names of animals. The very word "animal" has no proper semantema in Chocho, but is expressed by a compound of the two morphemas: *u-ba*.

On the other hand it is interesting to compare the personal suffix *-ri*, with the words for "human being" in Chocho. There is no proper semantema for "human being" in Chocho; instead we have the following expressions: *jru-rxi* human being, *jru-ndoa* man. We find the same phonema *jru* also connected with "human being" in Zapoteco and Mazateco.

Finally, it is interesting to note the parallelism between Chocho and Zapoteco in using two very similar phonemas for "human being" and "animal". In Zapoteco *ma* and *me*, or *bi* and *ba*, etc.; in Chocho *jru* and *jri*.

There is here evidently some sort of mixture of genetic affiliation on the one hand, and of borrowing (either of morphemas directly, or of analogical sound-variations), on the other hand but it is difficult to unravel their history.

Number. — This is expressed in Chocho by the independent word *kata* all, and also in connection with person by the sound-variation that we have already described.

Negative. — The negative is expressed by the word *za*.

To summarize: Chocho is fundamentally monosyllabic-isolating in technique. Possession in the noun and predication in the verb are treated in the same manner, viz. by relating noun or verb to person. Time is viewed as aspect and is expressed by prefixes. Tone is an important element in expressing person. All these appear as fundamental traits of Chocho. Furthermore they are traits which form the morphological basis of all the languages of the group.

The expression of nominal classes in connection with person, on the other hand, is clearly a superimposed recent acquisition, most probably directly borrowed from Zapoteco.

Mazateco.

Introductory. — Mazateco territory takes in the upper reaches of an affluent of the Rio Tonto, the Rio Tilpan. This river originates in a group of very high mountains, to the North of the Cuicateco region. It is a cold and rather inacessible country. The main pueblos are Huautla *(téhò)*, Tenango *(gátyà')*, Mazatlan *(tcìnté')*, Chiquihuitlan *(tcíbinì)*, where both Mazateco and Cuicateco are spoken side by side.

The Rio Tilpan then descends into the low hot lands where it joins the Rio Tonto, and further on the Tonto receives another set of affluents. The main pueblos of this second region are Yxcatlan *(jyúngù-tsè* rich temple) and Soyaltepec *(nájìr-né* wild speech).

The Mazateco mountains are separated from the Cuicateco mountains by a large river, the Santo Domingo, flowing in a deep canyon. On this river are Ayautla *(gífì)*, and Jalapa (*ndó-jrà* water-stone). Below Jalapa the Santo Domingo enters Chinanteco territory.

In each one of these three regions a slightly different dialect is spoken. In this study we have taken as type the dialect of Chiquihuitlan.

Pronominal forms.

	Independent	Affixed		
		Predication	Possession	
			Essential	Accidental
I	*ga-ą*	*-a, -ɛ, -u*	*-nq*	*-tsqq*
we incl.	*ga-jyqq*	*-qq, -ęę*	*-nahq*	*-tsahq*
we excl.	*ga-jyi*	*-i*	*-nihi*	*-tsihi*
thou	*ga-jye*	*-e*	*-rihi, -ri*	*-tsihi*
ye	*ga-jyu*	*-u*	*-nuhu*	*-tsuhu*
he (human)	*dja*	*-a, -dja*	*-re-dja*	*-tse-dja*
he (animal)	*dju*	*-a, -dju*	*-re-dju*	*-tse-dju*

The above forms are for Chiquihuitlan. In Jalapa they are as follows:

	Independent	Suffixed
I	*ą*	*-a*
we incl.	*nyą*	*-a*
we excl.	*nye*	*-e*
thou	*xyi*	*-e*
ye	*hu*	*-o*
human	*tca*	*-tca*
animal	*tcu*	*-tcu*

Examples:

	Predication	Possession	
	to give	Essential head	Accidental field
I	*sw-a*	*cku-nq*	*hnu-tsqq*
we (incl.)	*t-ą*	*cku-nahq*	*hnu-tsahq*
we (excl.)	*t-i*	*cku-nihi*	*hnu-tsihi*
thou	*t-e*	*cku-rihi*	*hnu-tsihi*
ye	*t-u*	*cku-nuhu*	*hnu-tsuhu*
he (human)	*sw-a-dja*	*cku-re-dja*	*hnu-tse-dja*
he (animal)	*sw-a-dju*	*cku-re-dju*	*hnu-tse-dju*

Double radical of verbs. — It will be noticed immediately from a glance at the above example of predication, that two entirely different radicals are used for the verb to give: one for the first and third persons; the other for "we", "thou", and "ye". This is the case for the great majority of verbs in Mazateco. Thus:

	to speak	to make	to drink
I	*tca*	*seme*	*be*
we i.	*nuxą*	*ninyą*	*djyą*
we e.	*nuxi*	*ninyi*	*djyi*
thou	*nuxe*	*ninye*	*djye*
ye	*nuxu*	*ninyu*	*djyu*
he (pers.)	*tca-dja*	*seme-dja*	*be-dja*
he (anim.)	*tca-dju*	*seme-dju*	*be-dju*

Predicative and possessive treatment of person. — We find that in Mazateco just as in the other languages of the group, possession and predication are treated in the same manner, i. e. by relating to person. Person on the other hand is expressed by a rather bare sort of suffixation of the pronouns. In the case of the third persons it can hardly be called suffixation. The morphemas *dja, dju,* may as well be said to be postposited.

Nominal classes. — We find in Mazateco the same classification into "human" and "animal".

Number. — The plural is expressed by independent words, when necessary, but not by any grammatical device.

Time. — Time is envisaged grammatically as aspect. The aspects are the same as in the other languages of the group, and are expressed, as in them, by prefixes. The prefixes also are similar: *ka-* for the Perfect *(ki* in Jalapa), *ti-* for the Continuative, *kwe-* for the Inceptive. Altough there are irregularities, the use of these prefixes is much more regular and simple than in Zapoteco.

The Perfect and the Continuative are often compounded with the verb "there is" *be:* I gave *ka-swa* or *ka-be-swa* (or even *ka-be-ka-swa);* I am giving *ti-swa* or *ti-be-swa.* This is a sort of intensifying process. It shows again how superficial is the process of affixation.

The verb "there is" is either *be, he,* or *fe,* all these variations being phonetically indifferent in Mazateco.

Aspect need not be expressed in the verb, the radical alone being sufficient: *swa* I give, *tą* we give, (either in the past, or in the future, or continually, etc.)

Negative. — The negative is expressed by a modification of the pitch tone. Usually, but not always, the modification consists in imparting to the radical a rising tone: *kà-tsiké* I killed, *kà-tsiké* I did not kill; *swá* I give, *swa* I do not give. Sometimes a proclitic *a* is prefixed: *à-swǎ.*

Tone. — Aside from the above, tone does not appear to be used functionally in Mazateco. Semantically however it is very important.

So much as already been said regarding the peculiarities of the monosyllabic-isolating technique that it is unnecessary to repeat it here.

Cuicateco.

Cuicateco is spoken in a small block of rather high and bare mountains almost entirely surrounded by the circular course of the Río Grande which flows into the Santo Domingo. Most of the Cuicateco pueblos are in these mountains: Pápalo, Coyula *(gwíyà),* Teutila *(kwétyákù),* Tlalistac, Tepeucila, Teponaxtla, Chapulapa *(dyáká),* San Andres *(nà-ìkó* on the mountain), Santa Cruz *(yúnì).* There are also two large pueblos situated on the river: Cuicatlan *(nyą́-bákù* pueblo), and Quiotepec; very little Cuicateco is spoken in either of these two, nowadays.

Cuicateco is therefore contiguous to Mixteco to the east. As a matter of fact Mixteco seems to have encroached into Cuicateco territory. I passed through several pueblos where only Mixteco was spoken. I was told however that these villages had only been founded in recent times.

There has evidently been a great deal of direct semantic borrowing of Mixteco words in Cuicateco. A great many Cuicateco semantemas are practically identical with Mixteco ones. The morphological features however, except insofar as both languages partake of the type common to the whole group, show that the two languages are genetically different. When the semantemas are not practically alike, then they are utterly different.

Pronominal forms.

	Independent	Suffixed
I	*ú*	*-ú*
we incl.	*ű*	*-ű*
we excl.	*nú*[1]	*-nú*
thou	*dhi*	*-dhi*
ye	*da-dhi-tcu*	*-ni* or *-ne*
he (pers.)	*i-nya* or *i-san* or *san-ga*	*-nya* or *-są*
he (anim.)	*i-ti*	*-ti*

Predicative and possessive treatment of person. — In Cuicateco as in the other languages of the group, predication in the verb and essential possession in the noun are treated in the same manner, namely by relating it to person, and this is expressed by a suffixation of the pronoun which is so bare that it may as well be called post-position. Examples:

	to kill	to pierce	head	home
I	*nu-u*	*kaa-u*	*tcata-u*	*baku-u*
we (incl.	*nu-ű*	*kaa-ű*	*tcata-ű*	*baku-ű*
we excl.	*nu-nu*	*kaa-nu*	*tcata-nu*	*baku-nu*
thou	*nu-dhi*	*kaa-dhi*	*tcata-dhi*	*baku-dhi*
ye	*nu-ni*	*kaa-ni*	*tcata-ni*	*baku-ni*
he (pers.)	*nu-są*	*kaa-są*	*tcata-są*	*baku-są*
he (anim.)	*nu-ti*	*kaa-tį*	*tcata-ti*	*baku-ti*

It need hardly be pointed out that if the noun is directly expressed instead of being represented by a pronoun of the third person, the noun is merely postposited: *baku Pedro* (Pedro's home), *baku nạ* (dog's home), *baku ndatạ* (woman's home), etc.

Accidental possession. — Expressed by means of the word *nye'* of.

boi nye' u my house
boi nye' dhi thy house

[1] or *nu-tcu* "we all".

Time. — In Cuicateco as in the other languages of the group time is envisaged as aspect, and the aspects are the same: Perfect, Continuative, and Inceptive. The Continuative is always expressed by the prefix *ri-*. The Perfect and the Inceptive may be expressed by *tcii-* (or *tcee)* and *kaa-* (or *kama-*, rarely *ku-*, *kwi-)* respectively, or without prefixes by a falling tone for the Perfect and a rising tone for the Inceptive:

	Perfect	Continuative	Inceptive
to make	*dhî*	*ri-dhi*	*dhi*
to shoot	*kâ*	*ri-ka*	*kǎ*
to pay	*ndádȟbe*	*ri-ndadibe*	*ndàdȟbe*
to sell	*tci-ndikwi*	*ri-ndikwi*	*ka-ndikwi*
to suffer	*tci-tcee*	*ri-tcee*	*kwi-tcee*

There are however a good many irregularities, but they do not give the impression of being remnants of old features, but rather of being new features which have not yet been established and are still wavering:

	Perfect	Continuative	Inceptive
to sit	*tci-ndi*	*ri-ndi*	*ka-ku-ndi*
to die	*tci*	*ri*	*ku-bi*
to speak	*tci-rạ*	*ri-rạ*	*ka-ma*
to rejoice	*nyąi*	*ri-nyąi*	*kubi-nyąi*
to walk	*ka-tci-ka*	*ri-tci-ka*	*ka-ku-tci-ka*
to grow	*ka-ne*	*ri-ne*	*ku-ne*
to sleep	*ka-yadhu*	*ri-yadhu*	*ku-yadhu*
to go	*kwi-na*	*ri-na*	*na*
to go	*tce* or *kwe*	*rẹ*	*kẹ*
to go	*ndá* or *tci-nda*	*ri-nda*	*ndǎ* or *ka-nda*
to eat	*tcê*	*re*	*tcě*
to fear	*dhíyà*	*ri-dhiya*	*kubi-dhìyá*
to awaken	*na-ndutci*	*ri-ndutci*	*ka-* or *ku-ndutci*
to load	*kándedȉ*	*ri-kandedi*	*kàndedí*
to drink	*tcî*	*ri*	*ku*
to be	*tci-nu*	*ri-nu*	*ka-nu*
to be	*ne* or *be*	*ne* or *be*	*ne* or *be*
to grab	*kai*	*rai*	*ka-kwei*
to take	*ka-ndai*	*ri-ndai*	*ku-ndai*

etc.

Negative. — A negative is expressed by the independent word *gwe*.

The structure of Cuicateco is therefore extremely simple. It conforms very well to the monosyllabic-isolating type. The class distinction into "human" and "animal"

for the third person has probably been borrowed directly from Mixteco. The temporal prefixes are probably a recent acquisition.

The semantic list shows a large proportion of disyllabic and trisyllabic stems. The majority are probably compounds.

Mixteco.

Introductory. — Mixteco is spoken over a large part of the Oaxaca territory, taking in practically all the western half of it. Mixteco is therefore the great rival of Zapoteco. The town of Oaxaca itself is nearly as full of Mixtecos as it is of Zapotecos. Thus there probably arose as a result of this situation, the popular conception of Mixteco and Zapoteco as the two languages in this region, of which all the others are dialects. The name Mixteco (pronounced locally *miste'ko)* is perhaps of Aztec origin.

The "Mixteca" is for the greater part a region of mountains. There are reported to be several dialects. Our material was obtained chiefly from two informants in Oaxaca. One came from the pueblo of Tidaa. The other from Chalcatongo. The difference between them is quite marked although they are clearly dialects of the same language.

Pronominal forms.

1. *Dialect of Chalcatongo:*

	Independent	Suffixed
I	*ru'u*	*-ri*
we	*jyo'o*	*-yo*
thou, ye	*ro'o*	*-ro*
he (pers.)	*nywa, de*	*-de*
he (anim.)	*kötö*	*-tö*

2. *Dialect of Tidaa:* (reverential forms used when adressing a superior, an older person, a stranger, etc.)

I	*we-nzu*	*-nzu*
I rev.	*we-na*	*-na*
we dual, trialis and plural indicated by *di* + number + [*-nzu* or *-na*]	*dindunzu* *dinuninzu* *dikunzu* ..... *didanzu*	*-nu*
thou	*we-u*	*-u*
thou rev.	*we-ni*	*-ni*
ye dual etc.	*dindunu*	
indicated as in	*dinuniu*	
1st p. with ending *-u*	*dikunu* ..... *didanu*	
he (pers.) *jywa* or [or: *we-ndza* (rev.) *we-i* (woman or child) *we-nya* (wom. rev.) etc.]	*de-jye* or *tce-jye*	*-wa*
he (anim.)	*we-ti*	*-ti*
it	*we-ci*	*-ci*

Predicative and possessive treatment of person. — This is in all ways comparable to the same in other languages of this region. We will therefore avoid a useless repetition and limit ourselves to a couple of examples:

Dialect of Tidaa:

house	*we'e*
my house	*we'e-nzu* or *we'e-na*
our house	*dida-we'e-nu*
thy house	*we'e-u* or *we'e-ni*
your house	*dida-we'e-u*
his house	*we'e-wa* (or *-nza, -i, -nya,* etc. if the fact that the subject is a superior, a woman or child, a woman of respect, etc., needs to be emphasized)
his house (animal's)	*we'e-ti*

Accidental possession. — Expressed as in other languages by a word "of" *(tci* in Tidaa, *jye* in Chalcatongo). This however is not followed by the suffix of person, but by the pronoun itself.

it is mine *tci-wendzu* (Taa.) *jye-ru'u* (Cltg.)

Time. — Aspect is expressed in the same manner as in the other languages of the group, by affixes. These affixes are clear and simple, and do not give the appearance of an old trait. The Perfect is expressed by *ni-;* the Inceptive by *ki-* or *ku-;* the Continuative is *ha-* or *a-* in Chalcatongo, *na-* or *da-* in Tidaa. In Tidaa *sa-* is also found for a Future of eventuality (cf. Zapoteco of the Valley).

Mixteco then exhibits the same characteristics of monosyllabic-isolating structure as the other languages of the group.

Chatino.

Introductory. — Chatino is spoken in a mountainous area bordering on the Pacific Ocean. The name Chatino comes probably from *tce-ʾnyą* (lit. word *-ʾnyą*), the name given by the natives to their own language, while they call themselves the *ʾnyą* people *(ne-ʾnyą)*.

Our material was obtained from a single informant in the city of Oaxaca, and is unfortunately rather scant. It agrees very well however with the material collected by Prof. Franz Boas and published by him in the American Anthropologist (Vol. 15, No. 1, 1913), the differences being probably accountable by local dialects. Our informant came from the pueblo of Panixtlahuaca.

Pronominal forms.

	Independent	Suffixed
I	*nă*	*-na*
we incl.	*nǫ́*	*-nǫ*
we excl.	*ware*	*-wa*
thou	*ỹʾỹwi*	*-ʾnwi*
ye	*ʾỹwẹ*	*-wẹ*
he	*yu-kwa* or *nu-kwa*	*-yu*

It may be noticed immediately that there is lacking the class distinction into "human" "animal" that we have found in the other languages of the group. Evidently this feature has not yet spread to Chatino.

According to our informant *nu-kwa* and *yu-kwa* are used both in the singular and the plural. *yu* being somewhat more indefinite than *nu*.

Predicative and possessive treatment of person. — This is in every way comparable to that of the other languages of the group, with a slight difference.

The forms for "I, we incl.", and "thou" are suffixed only for possession (essential), but not for predication. These persons are expressed in predication only by tonal changes in the radical: low for "I", high (and nasalized) for "we incl.", high for "thou". This rule is not however invariable: these three persons are sometimes expressed by tone only in essential possession, and vice-versa by suffixation in predication.

Examples:

	to cut	father
I	*syù*	*sti-na*
we incl.	*syǫ́*	*sti-nǫ*
we excl.	*syu-wa*	*sti-wa*
thou	*syú*	*sti-ʾnwi*
ye	*syu-wẹ*	*sti-wẹ*
he	*syu-yu*	*sti-yu*

Accidental possession. — There does not seem to be in Chatino the same tendency to differentiate between accidental and essential possession that we find in the other languages of the group. Possession is expressed most usually by the direct treatment of person, whether the possession is essential or accidental. It is however always possible to express possession in the same indirect method as used in the other languages for accidental possession. The word "of" in this case is on a base of *nǫ*, thus:

mine	*nǫʾnyǫ-na*
ours incl.	*nǫʾnyǫ-nǫ*
ours excl.	*nǫʾ-wa*
thine	*nǫi-ʾnwi*
yours	*nǫ-ʾnwẹ*
his	*nǫi-yu*

Time. — The divisions of time do not appear to be as clearly cut as in the other languages of the group. The Perfect is often indicated by *gwa-* or *hw-;* the Inceptive by *sa-* or *tca-;* sometimes these two aspects appear to be distinguished from one another by a reversal of tone pattern. The Continuative is marked by a prefixed *na-* or *nda-*, or by a suffixed *-ni*.

Chatino gives the impression of being even more monosyllabic-isolating than the other languages of the group. It has a great many elements in common with Zapoteco. The semasiologies of the two languages have more in common than other languages (except perhaps Mixteco and Cuicateco). This may be the result of direct borrowing on the part of Chatino. On the other hand the

fact that the temporal prefixes appear to be old remnants, and that they are phonetically similar to the Zapotecan ones, would indicate that Chatino and Zapoteco were genetically related and have undergone the same process of attrition toward monosyllabism.

The Zapotekan Group Viewed as a Whole.

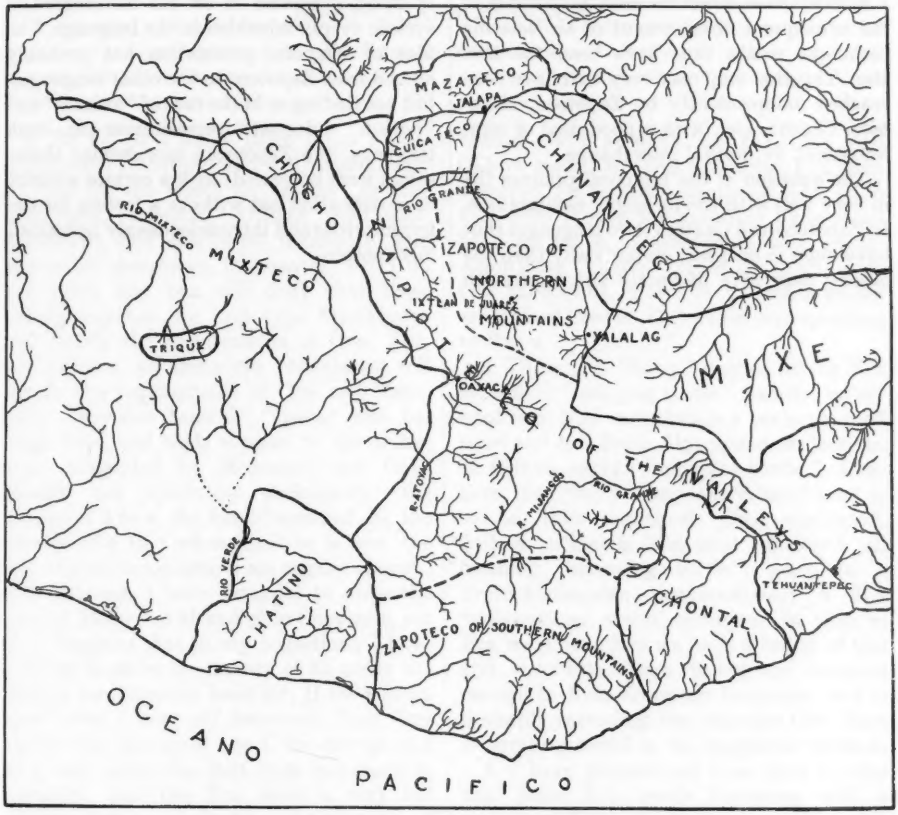
The outstanding feature of morphology common to all the languages of this group is that predication in the verb and possesion in the noun receive the same treatment: both are expressed by relating verb or noun to person, so that "I cut" and "my head" are expressed in the same manner, cut-I, head-I.[1]

A second outstanding feature of morphology common to them all is the expression of time as aspect rather than tense, by means of prefixes. But we have seen that this feature is not equally developed in all the languages: in Zapoteco and Chatino it gives strongly the impression of an old trait in process of attrition; in the rest, the system of temporal prefixes exhibits a regularity and clearness which indicate recency.

A third outstanding feature of morphology is the introduction of nominal classes in connection with the third person. Here we find divergences. In Mazateco, Chocho, Cuicateco, and Mixteco, the emphasis is between the two classes "animal" and "human". In Chinanteco the emphasis is between the two classes "animate" and "inanimate". Zapoteco stands in between the two, having the three classes "animal" "human" and "thing". Let us look at the question a little more closely: in Chinanteco the class involves the object, not the subject; furthermore we have seen that the "animate" class is expressed by a technique which is less fundamental than that for the "inanimate" class, namely by means of suffixes which recall the Zapotecan ones; it would appear therefore that Chinanteco borrowed from Zapoteco two of its classes, "thing" as "inanimate", and "animal-human" as "animate". On the other hand the classes "animal" vs. "human" are not equally developed in all the languages that have it. The names of animals bear a distinctive prefix in Zapoteco, Chocho, Chatino, Mixteco, and Cuicateco. But we have seen that in Cuicateco it is a direct borrowing from Mixteco, and in Mixteco it is less a prefix than the very word "animal" preposed to the particular name, thus indicating that Mixteco has borrowed the idea and given it its own semantic expression. In Zapoteco, Chatino, and Chocho, there is a real animal prefix. But of these three it is Zapoteco where the prefix is most deeply imbedded, so much so in fact that all animal names seem to be mere sound-variations on a primary theme of *mb-* (*mbak* dog, *mbau* coyote, *mber* turkey, *mbal* serpent, etc.). When it comes to the introduction of this class "animal" as a suffix in the third person, we find it absent in Chatino, present in Chocho, Mazateco, Mixteco, and Cuicateco but clearly of recent origin in all these languages. In Zapoteco it is present and its development can be traced back to its origin in the strictly monosyllabic-isolating technique as exhibited in the southern dialects with its word-order of verb-subject-object. It seems therefore not too far-fetched to assume that Zapoteco, Chatino and Chocho carried within themselves the germ of an animal class in the prefixes to the names of animals. Chatino failed to develop it as a grammatical device to express person. Zapoteco did so in the manner that we have seen, and from Zapoteco it passed on bodily to the other languages including Chocho.

Another feature common to all these languages is monosyllabism. This is partly semantic, partly morphological. Morphologically it is part and parcel of the question of isolatism in technique. Semantically however

[1] If this gives us the feeling that the noun receives the same treatment as the verb, it is merely because this treatment is accorded in our languages to the verb but not to the noun.



Distribution of Zapotecan Dialects

it is a curious phenomenon if it is to be interpreted as a phenomenon of diffusion. For it is not so very evident why the tendency to reduce semantemas to a single syllable should spread from one language to another, without attacking the phonemas themselves. And yet it is not more difficult to explain than the similar phenomenon of diffusion of a complex of phonetic features over a wide territory comprising totally unrelated languages, a phenomenon observed time and again in America and present notably in the Oaxaca territory. Monosyllabism is often closely associated with pitch-tone. A possible explanation may therefore be hazarded in the present case as follows: Chinanteco bears many evidences of having been a tonal monosyllabic tongue for a long time. Perhaps Chinanteco represents the original language spread over the region of Oaxaca before the advent of the Zapotecos and other peoples. These conquerors would have seen their own tongues infected little by little by the prevalent phonetic structure. A levelling to

a monosyllabic structure most favourable to the subsequent development of an isolating technique would thus have been the first step. This first step may very well have been reached independently by Zapoteco, Mazateco, Chocho, etc., with a good deal of reinforcement by mutual interchange.

The question of the temporal prefixes fits in very well with the foregoing assumptions. In Zapoteco and Chatino (two languages that have more in common semantically than the others) they give distinctly the impression of being remnants of an old disintegrating system deeply inbedded in the language. The idea of temporal prefixation has probably spread from Zapoteco to the other languages, but not finding as in the case of "animal" and "person" adequate semantemas in each language, the Zapotecan morphemas themselves were borrowed, with a certain amount of modification but without a feeling for the irregularities and intricacies deeply imbedded in Zapoteco.

ALGONQUIANA PARERGA[1]

By Truman Michelson

1. So far as I know there is no Proto-Algonquian archetype that will satisfactorily account for the words for "spoon" in Cree (*ēmihkwān*, animate), Ojibwa (*ämi'kwān*, inanimate), Fox (*äme'kwäni*, inanimate), and Menomini (*ämiskwʌn*, inanimate). Yet I do not think any one will deny that these belong together. An archetype **ämehkwäni* will satisfy the requirements of Cree, Fox, and Ojibwa; an archetype **ämeçkwäni* will satisfy the requirements of Cree and Menomini. Cheyenne *hamï'šk*^{u} "spoon" also belongs here, and lends support to the archetype demanded by Menomini and Cree, though not absolutely decicisively: the change of *ä* to *a*, the loss of terminal *-ni*, the change of *ā* to ^{u} when final *-ni* is lost, the loss of postconsonantic *w* are regular enough; and although I have material to show the general history of *hk* and *çk* in Cheyenne, yet it so happens that in my collections I have nothing to show the history of *hk* under the precise conditions in *hamï'šk*^{u}. If the Ojibwa word were a very old loan-word from Cree (before the change of *e* to *i*, the change of *ä* to *ē*, and before the shift from inanimate to animate), and the Fox word a very old Ojibwa loan-word (before the change of *e* to *i*, and the loss of final *i*) **ämeçkwäni* would answer all requirements. Such a daring hypothesis is unprecedented in American linguistics, but it is common knowledge that such phenomena occur in Indo-European linguistics. Anyhow, there is at least one almost certain loan-word in Ojibwa from Cree (*uctigwān*, head), and to judge form Watkins' material some in Cree from Ojibwa.

2. Cree *kwēsk-*, Ojibwa *kwä'k-*, Fox *ku'k-* (all initial stems meaning "turn") present a decided phonetic difficulty. An archetype **kwäxk-* will account for the Cree and Ojibwa stems; but this leaves the Fox stem unsolved, for postconsonantic *wä* is found in Fox, even though the examples I can recall have *wä* for *u* in accordance with Proto-Algonquian "change" of *wä* for *u* with only two exceptions. There is no other known example of Cree *wē*, Ojibwa *wä* corresponding to Fox *u*.

3. There is a "fancy" way of saying Fox *me'ci'kä'a* "snapping turtle", namely, *me'ci'känä'kwa*. Now *me'ci'kä'a* is a perfectly good word and has Proto-Algonquian credentials, cf. Ojibwa *mici'kä* "snapping turtle." I believe the "fancy" way *(me'ci'känä'kwa)* is to be thus explained: Cree *miskināhk*, Ojibwa *mi'kinä'k*, Menomini *mihkä'näh* (all meaning "snapping turtle") point to a Proto-Algonquian **mexkenähkwa*; a Fox **me'kenä'kwa* would correspond to this; in Fox *me'ci'känä'kwa* we have a fusion of this and *me'ci'kä'a*. Such fusion are common enough in Indo-European languages, and it is simply extending the principle that there is anything novel in the suggested solution.

4. I have pointed out from time to time that some Fox words beginning with a consonant have doubtlets beginning with initial *a* followed by the same consonant, though I do not know the rationale of this. I wish now to point out a case where other Algonquian languages have initial *a-* but not Fox: Fox *nämi-* underneath; Fox *nämepyägi* under the water, Ojibwa *anämi-* underneath, *anämibīñg* under the water, Cree *atämi-* underneath, *atämipēhk* underneath the water, Menomini *anämipik* under the water, Natick *ano'me* within; etc. An archetype **aθämepyäñki* is the presumable source of *anämibīñg*, etc., but the final *-hk* of Cree

[1] Printed by courtesy of the Smithsonian Institution.

atāmipēhk is not certain (*g*?) though indicated by another derivative, *atāmihk*; and Menomini *anāmipik* terminally is not entirely satisfactory. Fox *nāmepyāgi* is regular, but lacks the initial *a-*. Cheyenne *hotoma* within (Petter) belongs here; for *θ* regularly becomes *t*. The prototype may be **aθāmeñki* (Cree *atāmihk)*.

5. Mexican Kickapoo *äwīgi* also, corresponds to Fox *äyīgi*. The combination *äwī* is unknown to Fox; and since it is impossible to formulate any shift whereby *y* appears now as *y*, now as *w* in Kickapoo, we must consider that Kickapoo *äwīgi* is more primitive than Fox *äyīgi*. As Proto-Algonquian *ē* appears as *ī* in both Kickapoo and Fox (and in most Algonquian languages; Menomini forces us to assume *ē*, not *ī*, as the Proto-Algonquian sound), the shift may be formulated: *äwē* becomes *äyī* in Fox.

6. The word for "kettle" in Cree is *askihk* (pl. *askihkwa·g)*, in Ojibwa *a'ki'k* (pl. *a'ki'kōg)*, Menomini *ahkä'h (ahkä'hkuh* in the kettle, *utä'hkehkun* her kettle), Fox *a'ku'kwa* (obviative *a'ku'kōni*; *ketᴧ'ku'kunāna* our kettle, i. e., drum). The Proto-Algonquian archetype is hence very clearly **axkehkwa* in spite of a hitherto unexplained apparent irregularity in the vocalism of Fox *a'ku'kwa* which I propose to elucidate now. In no Fox texts published does *e* occur before terminal *-'kwa* when this represents Proto-Algonquian *-hkwa*. The shift may thus be formulated: *e* becomes *u* before *-'kwa* when representing Proto-Algonquian *-hkwa*, but remains before *-'kwa* when representing Proto-Algonquian *-xkwa* (Fox *ame'kwa*, Ojibwa *ami'k*, Cree *amisk* postulate Proto-Algonquian **amexkwa*).

7. Ojibwa *kwīwisāns* boy (so, over a dozen times in Jones's Ojibwa Texts), corresponds to Fox *kwīye'sä'a* boy, though they have different diminutive suffixes. (I regret to say a Fox variant *kwīya·sä'a*, etc. given by Jones can not be sustained, nor can his Kickapoo correspondent, as shown by internal evidence, be relied upon.) With the assumed shift of original *-ēwe-* to Fox *-īye-* all is in order. (Original *ē* becomes *ī* in both Ojibwa and Fox; original *e* becomes *i* in Ojibwa.) In support of this it may be pointed out that the combination *-īwe-* is lacking in Fox. And there are known parallels insofar as *-ēwu-* becomes *-īyu-* in Fox, and *-ēwō-* becomes *-īyō-*.

8. Trumbull, Natick Dictionary, Bull. 25, Bur. Amer. Ethn., p. 237, is rather worried because *wehpamau* he has sexual intercourse with her, and *wehpumau*, *wehpimau* he, she shares a meal, eats with him, her, are apparently the same word. Without doubt the two are distinct: observe Fox *wī'pämäwa* and *wī'pumäwa* respectively correspond to the two Natick words.

9. Cree *wīhpēmēw* he, she sleeps with him, her, obviously corresponds to Fox *wī'pämäwa*, the primary meaning of which is the same. These point to **wēhpämäwa* as the Proto-Algonquian archetype, but this is in violation of the rule laid down by Bloomfield, Language, vol. 1, pp. 150, 151 *(*wēt-* + **-pä-* should yield **wēxpä-)*. Granting that the rule is correct, if Cree *wīhpēm-* were an early Ojibwa loan-word, the phonology would be impeccable, for Proto-Algonquian *hp* and *xp* fall together in Ojibwa, Fox, Menomini, and some other languages, and then an archetype **wēxpämäwa* would account for the the Cree and Fox words; but normally **wēxpämäwa* would yield Cree **wīspēmēw*. In conclusion I cite Ojibwa *wī'pämāt* he lay with her, in Jones's Ojibwa Texts, vol. II, p. 460, line 13.

10. Bloomfield notes (Language, vol. 1, p. 151, 152) that in the absence of Cree forms it is not possible to be certain whether *tk* became Proto-Algonquian *hk* or *xk*, preferring the last on the analogy of the change of *tp* to *xp*, according to his views. Part of this difficulty comes from the fact that in Cree the inanimate auxiliary *-at-* is largely or nearly entirely replaced by *-an-* (e. g., *-nāgwan* [*-nākwan* in Bloomfield's transcription] but Fox *-nāgwatwi*, Ojibwa *-nāgwad* it looks like); and in this way the forms

would not occur. But from Watkins's *tipiska'k*, Lacombe's *tibiskâk* we may infer a form **tipiskāhk*, meaning "tonight" which comes from *tipiskāw* it is night: in contrast with which observe Ojibwa *tibi'kad* it is night. From *tibi'kad tibi'ka'k* tonight, is derived in regular fashion: this is why the Ojibwa and Cree words for "tonight" differ in the quantity and quality of the last syllable.

11. On p. 618 of the Fortieth Ann. Rept. Bur. Amer. Ethn., I gave some rules regarding the combinations of Fox stems ending in *-at-* with various morphological elements, and stated that the same or similar rules occur in several Algonquian languages which has since been confirmed by Bloomfield. To these rules I can now add that in Fox when juxtaposition with *-gwäni* would occur, we have *-atugwäni*, and from Baraga's Ojibwa material either the same or similar state of affairs occurs *(-adogwen*, i. e., presumably *-adugwän)*.

12. Ojibwa *nōgi-* stop, desist (and the Algonkin correspondent) clearly corresponds to Cree and Fox *nagi-* halt, but the phonology is not impeccable. All is in order if we assume that the vocalism of *nōgi-* is due to the analogy of *pōni-* cease, which is so widely spread in Algonquian languages including all those discussed in this connection.

13. Bloomfield, Language, vol. 1, p. 152, states he can cite but one example postulating Proto-Algonquian *çk*. I can add one more, namely, Fox *nō'ckwā-*, Ojibwa *nōckwā-*, Cree *nōhkwā-*, all meaning "lick".

14. Algonquian *cp*. Bloomfield, Language, vol. 1, p. 150 gives but a single example proving Algonquian *cp*. The following are three more examples: Cree *kīspin*, Ojibwa *kīcpin*, Menomini *kī'spin* (and variants), Fox *kī'pene* ("if however, etc."), Cree *kespoo* he has eaten to satiety (from Watkins; *kīspōw* probably), Fox *nemenwikī'-pu^{a}tce* I have a delightfully filled belly *(menwi-* delightful; *-^{a}tcä-* [possibly *-e^{a}tcä-*] belly, which becomes, *-^{a}tce* terminally before consonants); Cree *kespinutumowāo* he obtains it for him (from Watkins; *kīspinɑtɑmɑwēw* presumably), *kispinatew* il le gagne (from Lacombe; *kīspinɑtēw)*, Algonquin *kīcpinɑc* buy him (restored from Cuoq), Ojibwa *niñgīcpinɑnā* I buy him, her (restored from Baraga). Delaware *gispuin* to be satisfied, to have eaten enough (from Brinton) clearly belongs with the second example, but the form and phonetics are uncertain.

15. Cree instrumental particles. Rarely Cree stems have an instrumental particle *-st-* with both animate and inanimate objects which is in sharp contradiction to ordinary Algonquian usage. The explanation is that Algonquian *'θ* and *'t* merge into Cree *st*, thereby creating the false impression of uniformity. The Menomini correspondents (and, to a lesser extent, the Ojibwa and Fox ones) bring this out very clearly. A similar case is where Cree has *-t-* for an instrumental particle with both animate and inanimate object. The merging of *θ* and *t* into *t* account for it. Menomini, Ojibwa, and Fox prove this.

16. Fox *nī'si-* motion downwards has very obvious cognates in Algonkin and Ojibwa, as can be seen from the works of Cuoq and Baraga. Connection with Cree *nīhtci* down (and *nīhtci-)* is plausible, but such an equation does not conform to any known phonetic shifts. The object of this note is to suggest an explanation for the anomalous situation. Cree *nīhtinēw, nīhtinɑm* he lowers him, he lowers it, respectively, correspond to Fox *nī'senäwɑ, nī'senɑmwɑ;* these presuppose as archetypes **nēhθenäwɑ, *nēhθenɑmwɑ*. Now Cree stems ending in *ht* (from Proto-Algonquian **ht* and **nt)* have doublets in *htci* (from both Proto-Algonquian **htci* and **ntci;* in accordance with the principles enunciated by me years ago, and more recently elaborated by Bloomfield). Thus *pīhtinɑm* he puts it in (from **pēntenɑmwɑ)*, *pīhtci* (and *pīhtci-)* within (from **pēntci)*. If we recall that Proto-Algonquian **hθ* becomes *ht* in Cree, thus merging with *ht* from **ht* and **nt*, a solution

is at hand: Cree has analogically produced *nīhtci*. As *pīhtci* is to *pīhtinɑm* (etc.) so *nīhtci* was made to match *nīhtinɑm* (etc.). Fox *nī'si-* naturally comes from **nēhθɪ-;* the Algonkin and Ojibwa words and forms fall in line without difficulty. New-formations as the result of fusions of distinct sounds are common enough in Indo-European. [An example is *mūḍhá* of the Atharva-Veda beside *mugdhá* of the Rig-Veda, both being the past-participles of *muh* be crazed, the latter of which alone is etymologically justified. As is known, Vedic and Sanskrit *h* come from more than one Indo-European source; hence the confusion in derivatives of *muh*, owing to analogy.] The novelty consists in applying the principle to an American Indian language.

17. The examples proving Proto-Algonquian *'θ* that have been thus far given are so few in number that any new example will be welcome, namely, Menomini *inā'nam-*, Cree *itāstɑm-*, Fox *inā'sɑm-*, all meaning "facing", which require a Proto-Algonquian archetype **iθā'θɑm-*.

18. Cree *utisisin* "il est couché la face contre terre" and Cree *utihtɑpiw* "il est assis la face tournée vers la terre" obviously etymologically belong together. The posterior portions of both have been elucidated years, but the anterior portions of both have not been cleared up, though they follow known phonetic shifts. The *ht* of *utihtɑpiw* shows that the first *si* of *utisisin* comes from **hci;* this is in accordance with general knowledge and does not have to be proved here. Therefore we can confidently assert the posterior portion of *utisisin* to be **-hcihcinwɑ*. This step again presupposes knowledge of what has already been proved. The first *i* of both words must go back to original *e* or *ɪ*, not *i*. The posterior portion of *utihtɑpiw* comes from *ɑpiwɑ* as any one can see. But Cree *t* can come from **t* or **θ;* and Cree *ht* can come from **ht*, **hθ*, **nt*, **nθ*. In the present instance derivation of *ht* from **nt* is barred by the Cree variation *ht*, *si:* for instead of *si* we would have Cree **htci*. For similar reasons *ht* in the present case can not come from **ht*. We are forced back on either **hθ* or **nθ*. But **nθ* is so utterly rare that we may probably safely dismiss it. If correct, it would demand **-ncihcinwɑ*, instead of **-hcihcinwɑ* given above, for **θ* shifts to **c* before *i*. Owing to the merging of several sounds into Menomini *hn* and *n*, this is one of the cases in which we need at least the combined evidence of Cree, Menomini, Fox, and Ojibwa to determine the Proto-Algonquian archetypes, which evidence we as yet do not possess.

19. Cree *utihtēw* he reaches him, comes to him, and Ojibwa *nindudisā* I come to him, come basally from Proto-Algonquian **utehθ-*. It is well-known that in Proto-Algonquian **hθ* before **i* becomes **hc;* it is also well-known that **hc* becomes *c* in Ojibwa. So it is that Ojibwa *nindudiciwä* I arrive, comes from **netutehciwä; *utehci* comes from earlier **utehθ* + **i*. Ojibwa *nindudisi'kāgun* it comes to me, reaches me, *nindudisābɑmā* I arrive to the point or moment of seeing him, Cree *utisāpɑmēw* "il parvient jusqu'à le voir" clearly belong etymologically with the group under discussion. It will be recalled that in both Cree and Ojibwa Proto-Algonquian **hs* appears as *s*. We may therefore infer Proto-Algonquian **utehs*. It will be easier to follow the argumentation if it is remembered that in both Cree and Ojibwa, Proto-Algonquian **e*, **i*, *ɪ* merge into *i;* it is possible to determine the underlying vowel on the basis of these two languages alone only by the occasional phonetic effect, and by certain principles underlying Algonquian languages as a whole: which will not be often; for the most part the help of Fox and Menomini is neccessary to establish the underlying Proto-Algonquian sound. Fortunately in the cases under discussion the assistance of neither Fox nor Menomini is absolutely necessary, though had we known correspondents in these languages, the whole case would be simplified, especially as **h* is

retained before a sibilant in Menomini and *n* (earlier **θ*). Let us now return to Ojibwa *nindudisi'kāgun* it comes to me, it reaches me. The combination *-i'kā-* goes back to Proto-Algonquian *-*ehkā-;* this in turn goes back to an earlier **-ehkaw-* as I have shown years ago. Let us go back now to Cree *utisāpαmēw:* this represents Proto-Algonquian **utehsāpαmāwα*. Ojibwa *nindusisābαmā* goes back to Proto-Algonquian **netutehsāαpmāwα*. How now are we to unite **utehθ-*, **utehci-* with **utehs-?* Observe that in the words under discussion **utehs-* only occurs in such positions as **t* becomes **s* (which last was proved by Bloomfield years ago). I therefore believe everything can be harmonized if "Bloomfield's law" is extended to include Proto-Algonquian **θ* in addition to **t*. [Ojibwa *nindudi'tān* I come to it, reach it, is not germane to our discussion; but it may be stated that the instrumental particle **ht* requiring an inanimate object "goes" with **hθ* requiring an animate one. Cree *utisāpαmēw* he sees him in the distance, is a homonym of Cree *utisāpαmēw* discussed in this paper, and historically has nothing to do with it: owing to the merging of originally distinct sounds we get a false impression; cf. Fox *αte'tci* far off. This will be treated elsewhere.] As can be seen from Cuoq, Algonkin has correspondents to the words under discussion, and some others which belong here, but only one which is important in supporting the argumentation given above, namely, *otic* "aborde-le" (presumably, phonetically initially *u*) which comes from Proto-Algonquian **utehci*, as shown by general Algonquian linguistic principles. Owing to the fact **hθ* and **hs* merge into *s* in both Algonkin and Ojibwa, Menomini or Cree correspondents must usually be known before the Proto-Algonquian archetype can be set up (Fox is unavailing, because **hθ* and **hs* merge into *'s*). Hence some of the Algonkin words (and one Ojibwa correspondent) would be dubious of interpretation were it not for the Cree words quoted above. In view of these we may confidently assert that Algonkin *nindotisik* "il arrive chez moi" comes from a Proto-Algonquian archetype **netutehθekwα*, and that the *s* in *nindotisigon* comes from **hθ*, and not from **hs*. Algonkin *nindotitenima* and *nindotitenindan*, though grouped by Cuoq with *otic*, do not belong here and are ultimately connected with different Fox, etc. stems. The other Algonkin words are not discussed here because the space needed is incommensurate with their value. — Cree *utēyimēw* "il désire son arrivée" comes from **utālemāwα*, and so is cognate with the words under discussion, but lacks the "post-verbal extensions" of which I have spoken on other occasions, and very properly has the instrumental particle "going" with **-āle-*.

20. Fox *αte'tci* far off, presents some especial points of interest. First it should be stated that the variations given on p. 772 of Bull. 40, BAE., pt. 1, are without justification. The problem is, how is *αte'tci* to be connected with Cree *utisāpαmēw* "he, she, sees him, her, them (an.) in the distance". The Cree word presents no difficulties in the posterior part (*-āpα-* to see, transitive; etc.). However *utis-* is not very clear from a cursory view. If we start with Pre-Algonquian **ute't*, a solution is at hand. For in Proto-Algonquian **ute't* inevitably would become **ute's* before medial **āpα*, in accordance with the rule discovered by Bloomfield. By regular phonetic shifts **ute's* becomes *utis* in Cree. Now in accordance with the principles established by me several years ago, **ute't* would have a doublet **ute'tci* from which Fox *αte'tci* is doubtlessly derived, but some explanation is due. Initial *u* becomes *α* in Fox under unknown circumstances: Fox *α'sāmi*, Cree *usāmi* too much; Fox *α'sāwi-*, Cree *usāwi-* yellow; Fox *α'kαni*, Cree *uskαn* bone; Fox *α'ci-*, Cree *usi-* make; etc. Presumably vocalic assimilation and the character of the following consonant(s) determine the shift: at any rate the shift does not take place before Fox *t*

from **nt*, *'s* from **ns*, *p* from **mp*, *g* from **k*, *m* from **m*. In much the same way original initial *i* becomes *α* in Fox under conditions not as yet determined. It may be added that *'tc* regularly becomes *'tc* in Fox. As the glottal stop is retained in Menomini before a sibilant and *tc*, it is a pity the corresponding words in that language are not known, for the whole affair would then be very simple. — An objector may ask why I do not start with **uteht-* instead of **ute't*, and operate with a variation **utehtci*, **utehs*. The answer is that though **t* shifts to **s* under the conditions formulated by Bloomfield (and Cree *utisāpαmēw* fullfils them), the fact is that there are no known cases where **ht* shifts to **hs*, while the shift of **'t* to **'s* is amply documented. I admit, of course, that without these considerations it would be impossible to set up the Proto-Algonquian archetypes: for **hs* and **'s* merge into *s* in Cree; and **htc* and **'tc* merge into *'tc* in Fox. In any case Fox *'tc* of *αte'tci* force us to consider the *s* of Cree *utisāpαmēw* as standing for **'s* or **hs*, and not for **s* (or for that matter, **ns*, **c*, **'c*, **hc*, **nc;* all of which merge into Cree *s*).

21. Algonkin and Ojibwa *nāgu-*. Ita ppears from the works of Cuoq and Baraga that *nāgu-* appearance must be classified as an initial stem in both Algonkin and Ojibwa, whereas the correspondents in at any rate many Algonquian languages are secondary stems. This contraverts the opinion that I have given several times orally (and possibly in print, though if so, I can not lay my hands on the passage) that Algonquian languages agree among themselves in classifying cognate stems as initial or non-initial. There is, I believe, a plausible explanation for our apparent deviation. Cree has an initial stem *nōgu-* appearance, and a secondary stem *-nāgu-* appearance. We may suppose that in Algonkin and Ojibwa *-nāgu-* was extended in scope owing to the similarity of the stems, and wiped out **nōgu-*, and thus became *nāgu-*. [The Cree stems are written *nâku noku, nakoo, nookoo* by Lacombe and Watkins respectively. I do not know whether they occur in Bloomfield's texts.]

22. Fox *tepā-*, Menomini *tapā-*. Very obviously Fox *tepā-* be fond of (with the instrumental particles *-n- -t-)* and Menomini *tapā-* love (e. g., *nikēs-tapā'nāw* I loved her, on p. 124 of Bloomfield's Menomini Texts) are cognate, and there is ample evidence to show that both are properly recorded. Yet the vocalism *(e, a)* defies known phonetic shifts. An easy solution is at hand. In Proto-Algonquian "change" (no matter how this "change" is to be explained) in the vocalism was regular in the participial; the "change" for both *e* and *α* was *ä*, as shown by the collective evidence of Algonquian languages. So a participial **täpänαtα* the one whom thou lovest (Fox *täpänαtα)*, per se could come from either **tepā-* or **tαpā-*. I have not evidence enough to prove rigorously which actually is the Proto-Algonquian archetype. For our purposes it is not vital. To harmonize the Fox and Menomini forms all we need do is to assume that *tepā-* or *tapā-* was transferred into the wrong ablaut series, because in the participial **täpā-* could come from **tepā-* or **tαpā-*. The analogy of other stems showing the alternation *ä, α* or *ä, e* was the altering factor. Such transfers are common enough in Indo-European languages; the novelty consists solely in applying the principle to an American Indian language. Well-known examples are Old English *slincan*, English *slink* (shown by Old High German *slīhhan*), Old High German *gidīhan* 'gedeihen' (shown by Old English *geđungen*, etc.), Sanskrit *tōláyati* 'lift, weigh' (cf. *tulā'* 'a balance', 'weighing'; Greek τάλᾶς establishes that *tōláyati* is unoriginal).

23. An unusual reduplication in Fox. In my unpublished Fox texts I find *ä'inā'inā^{a}tc'* he was continually telling him. This is a reduplication of *ä'inā^{a}tc'*. Observe that not only the stem but also the instrumental particle and the objective pronoun are reduplicated.

NOTES ON THE TLAPPANECAN LANGUAGE OF GUERRERO[1].

By PAUL RADIN.

Introduction.

The following data were obtained from three students, aged respectively fifteen, twenty-two and twenty-eight, studying at the Casa Indígena in Mexico City. The first two came from the pueblo of Azoyu and the second from the pueblo of Iliatengo, both in Guerrero, Mexico.

Until the work of W. Lehmann[2], Tlappanec or Tlappaneca-Yopi, as he calls it, was regarded as unrelated to any other American Indian language. But even with the very inadequate data at his disposal — a vocabulary published by N. Leon[3] — Lehmann succeeded in demonstrating quite clearly that Tlappanec was closely related to the Subtiaba language of Nicaragua. The material presented in the following pages not only confirms Lehmann's finding but indicates that Tlappanec is far more closely relates to Subtiaba than even he suspected, that both are, in fact, subdialects of one and the same language.

Tlappanec-Yopi is spoken today in two separated areas, a smaller region in the *tierra caliente* west of the Papagallo river in Guerrero, approximately a day's journey from Acapulco, and a larger region, in the mountains southeast of the Papagallo river and situated on the boundary between the states of Guerrero and Oaxaca. The former people living in but one village Azoyu, call their language Tlappaneca whereas the latter occupying a number of villages in the mountains and apparently one village, Iliatengo, in the *tierra caliente*, call their language Tlappaneco. The differences between these two dialects are quite marked and it seems more than likely that they differ from one another far more markedly than either one of them does from Subtiaba. (Unless otherwise indicated, the forms in this sketch are from Tlappaneca. Forms marked (Tlo.) are from Tlappaneco.)

The following sketch does not claim to be more than an annotated vocabulary. The time at my disposal in Mexico was very short and the language is an exceedingly difficult one phonetically and morphologically.

In quoting the Subtiaba forms I have changed Lehmann's orthography to make it correspond to current Americanist usage.

Phonetics

Tlappanec has the following phonemes:

Consonants: *b, p, mb; d, t, nd; g, k, ŋg; dj, tc, ndj; j; c; r; l; m, (m̥); n, (n̥); ŋ, (ŋ̥), s, ts; ʿ, h, ʾ.*

mb, nd, ŋg, ndj are the nasalized forms of *b, d, g* and *dj* respectively.

h is a laryngeal breath.

ʿ seems to be distinct from *h*.

Vowels: *a; ɛ (e); i (ɪ); o (ɔ); u (v)* (and their nasalized forms.)

There are four tonal registers[1]: middle, high, low and very low. The fourth register is only found terminally but it is of functional significance, often being the only distinguishing feature between the plural and the singular. In all there are ten tone forms the four

[1] The editor apologizes for possible errors in Dr. Radin's paper. The author has read one proof but it has been impossible to get him to read the page proof.

[2] *Die Sprachen Central Amerikas*, Berlin, 1920. The part relating to Tlappaneca-Yopi is to be found in Vol II, pp. 969—973. The Subtiaba forms are given on pp. 919—968.

[3] *Anales del Museo Nacional de Arqueología y Etnología de México.* 1912, Apendix to Vol III, pp. LVII—LVIII.

[1] I do not mark the middle tone. ʹ indicates high tone, ˋ indicates low, ̏ very low, ˆ high to low, ˇ low to high, ˊ middle to high, ̀ middle to low, ̂ high to middle, ̌ low to middle.

mentioned above and the combinations of the first three registers (middle-high, middle-low; high-middle, high-low; low-middle, low-high).

Although my material is hardly adequate for any definite conclusions it is fairly clear that certain tone patterns occur in both verb and noun, particularly in the singular. Of these the most important seem to be the following:

1. High-high-low (1 sing., 2 sing., 3 sing.)
2. Middle-middle-low (1 sing., 2 sing., 3 sing.)
3. Low-low-low (1 sing., 2 sing., 3 sing.)

There are however numerous exceptions as the vocabulary will clearly show.

The Verb-Stem.

The Tlappanec verb falls into two well marked divisions, those that affix pronominal elements in the singular and those that do not. In the first group certain irregularities have arisen owing to the fusion of the terminal vowel of the stem with the pronominal affixes of the first and second singular. Many of the verbs belonging to this class are definitely static-neuter in meaning. Contrasted with these verbs we find another class that show no change of terminal vowel, barring the fixed rule that the vowel of the third person must always end on a low tone. All these verbs take a second singular in *ta- (ra-, nda-)*. This *ra-* is unquestionably the subjective form of the second singular because it regularly reappears in such forms as thou-me and disappears in such forms as I-thee and he-thee. Since the endings for the first and second singular of the first class of verbs are practically identical with the first and second singular of the possessive affixes used with nouns and are also found as the objective forms of the first and second singular of the subject-object conjugation, we can justifiably postulate two distinct sets of pronouns, a subjective series found only in the second person of active-transitive verbs and an objective series used as the subject of static-neuter verbs and the object of active-transitive ones.

Traces of this fundamental division of verbs are to be found in Subtiaba as well; e. g. What are you doing? *ma-na* ***da-ni***? What did you say? *mu·na ika na-**da**-ta*? In fact many of Lehmann's imperative forms probably contain this *da-* and he himself was somewhat puzzled by the occurrence of *-da-* after the prefix for the present tense[1].

The active-transitive verbs fall into the following groups:

(1) Those in *-a*. All three tone patterns are found. Examples follow:

to heal *mánitán·a, mátanitán·a, mănitán·à*
to look for *ndí·ʾíyáʾ, ntíʾíyáʾ, ndíʾíyàʾ*
to kill *maciyàᶜ, mataciyàᶜ, mací·yàᶜ*

(2) Those in *-i (ɪ)*. The tone patterns are with few exceptions, the same as those in (1). Examples follow:

to lift *nakúc·i, natakúc·i, nakúcì*
to scratch *manᵛqwʃʼ, natánᵛqwʃʼ, manᵛqẃì*
to do *náni, natáni, nănì*
to dig *màndì·, matàndì·, măndì*

(3) Those in *-o (ɔ)*. The tone patterns are high-high-low and low-low-low. Only a few verbs of this type exist. Examples follow:

to gather *naŋgɛ̂ʾmbɔ́ʾ, natágɛ̂ʾmbɔ́ʾ, naŋgɛ̂ʾmbɔ̀-lɛ̀*
to join *mąŋgɛ̂ʾmbɔ̀, matagɛ̂ʾmbɔ̀, nąŋgɛ̂ʾmbɔ̀-lɛ̀*
to know *naniʾnɧ̀ʾ, natatsí·nɧ̀ʾ, naníʾnɧ̀ʾ*
to count *maŋgúcʾnɧ̀, marácʾnɧ̀, maŋgúcʾnɧ̀*

(4) Those in *-u (v)*. The tone patterns are the same as in (3). Only a few verbs belong to this class. Examples follow:

to shake *máprigʉ́ʾ, nataprígʉ́ʾ, máparigʉ̀-lɛ̀*
to bury *mádùʾᵘ, mátadùʾ, má·dù-lɛ̀*
to tread *máḥŋgadʉ̀, mataḥŋgadʉ̀, máḥŋgadʉ̀*

With these must also be included the following groups that change their terminal vowel in the third person.

[1] Ibid. p. 939.

(5) *-a, -a, -ɛ*. All three tone patterns are found. This is one of the commonest groups in the whole language. Examples follow:

to lose *ninipátiga, nitsapátiga, ninipátigɛ̀*
to enclose *matsɣ̨ʾŋá, natatsɣ̨ʾŋá, nitsóʾɛ̨̀ʿ*
to pretend *ninikwé·nt·à, natanikwé·nt·à, ninikwé·ntɛ̀ʿ*
to soften *nagíwabáʾ, natagíwabáʾ, nagí·wabɛ̀ʾ*
to wash *má·ʿnᵛà, maráʿnᵛà, ná·ʿnᵛɛ̀*
to jump *natsígaʾ, natatsígáʾ, matsígɛ̀ʾ*
to give *nac·náʾ, narac·náʾ, nac·nɛ̀*

(6) *-u, -u, -i*. All three tone patterns are found. This is a very small group. Examples follow:

to cut wood *maruʿtùʿ, matruʿtùʿ, maruʿtìʿ*
to pour *mac·ndrígu, matac·ndrígu, mac·ndrígwì*
to sleep *ná·gúʾ, ná·núʾ, ná·gwìʿ*
to stand *nawáɲúʾ, manyáɲúʾ, magwiɲìʾ*
to work *matsútùʿ, mátatsuʿtùʿ, nátatsuʿtì·ʿ*

In the static-neuter verbs the prevailing formulas for the three persons are *-ɔ, -a, -ɔ; -v, -a, -v; -u, -a, -u*. No particular tonal patterns can be said to predominate. In addition to the three main patterns numerous secondary ones occur. Examples follow:

to rest *mandaná·kɔ̀ʿ, mandaná·kaʾ, mandaná·kɔ̀*
to dig *mámbɔ́ʾ, mámbáʾ, mámbɔ̀ʿ*
to finish *máni gámbɔʾ, mátsigámbàʾ, mánigá·mbɔ̀*
to die *makánᵛoʾ, makánᵛaʾ, makánᵛòʾ*
to be dirty *ku·bɣ̨́·ʿ, kú·bɣ̨́·ʿ, kú·bàʾ*
to believe *nanɛm·bɔ́ʿ, nanɛm·bàʾ, nanɛm·bɔ̀ʾ*
to be *nᵛáɲu, nᵛáɲwaʾ, nᵛáɲù*
to fall *maruʿkùʾ, maraʿkùʾ, maráʿkàʿ*
to cross *manɣ̨ʿŋgɔʾ, manɣ̨ʿŋgwàᵒ, manɣ̨ʿŋgɔ̀*
to be cold *nakarámu, nakarámáʾ, nakarámùʾ*
to be ashamed *naʿti·yuʾ, naʿti·yáʾ, naʿti·yùʾ*
to amuse oneself *mamak·ɔʾ, mamak·wáʾ, mamak·ɔ̀ʾ*
to get angry *makíénɔ, makiéna, makí·nà*
to fear *nacúʾɣ̨́, nacɣ̨́·wáʾ, nacú·ɣ̨*
to swallow *má·gáʿŋgɔʾ, migɣ̨́ʿŋgáʾ, ma·gáʿŋgɔ̀ʾ*
to sweat *maʿwigɣ̨́, maʿwigɣ̨́, naʿwigàʾ*
to be happy *n·a·djùʾʷ, n·a·djàʾ, n·a·djù*

There are a number of apparently active-transitive verbs that take both *ta- (ra-)* and what looks like the *-a* suffix. This *-a* is, however, the original vowel of the stem as the other forms clearly show. For example:

mataŋgɛ́·ŋga you mix; *muŋgɛ́·ŋgàʿ* they mix
marasíŋga you show; *musíŋgà* they show
matacú·ma you pull by rope; *macú·mà* they pull by rope
matagáy·áʾ you run; *átagayàʾ* run!

Verbal Prefixes.

Tlappanec has a fairly large number of prefixes the meaning of which is not, in every case, quite clear to me as yet. They are all either tense-modal or aspectual in meaning with the single exception of 2nd singular *ta-(ra-, nda-)*.

1. *ma-* indefinite present. Extensively used.
   má-ndáʾá I ask; *mánìʿ* I do
2. *da-, dᵛ-* indefinite present. Used with only a small number of verbs
   diyálɛcɔ̀ he breathes; *daɲì* I boil; *daiyárá'aʿ* I embrace

The other verbs belonging to this group are — to grow, be hot, know, look for, miss, be necessary, receive, see, wake up, live

3. *na-* durative present. Extensively used.
   nakarámu it is cold; *nakúc·i* I lift
4. *ba-* momentaneous present. Used only with *da-* verbs (Cf. 2)
   baiyálacoʾ I am breathing; *baɲì* I am boiling
5. *ni-* perfective durative
   nitsamɛ̀·gɔ I bent it; *nikúitáʿ* I bit it
6. *ma-ga-* to be about to. This is simply the verb to go
   magamuɲɔ I will wet myself; *magámát·ó* I will open
7. *nika-* was about to. This is simply the perfective of to go
   nikamáɲa I was about to wet; *nikamát·ò* I was about to wet
8. *-k-, -g-* hardly. Only two examples were obtained
   macgʷóʾŋga I hardly push *(macúʾŋga* I push)
   mackúdàʿ I hardly put *(nacúdà* I put)

9. *-ra-*, *-rᵛ-* transitive. Its transitive force comes out in certain forms clearly. In other cases its precise meaning is not always clear
ma-ru-'tù' I cut wood *(nitĭ* it was cut)
ma-ra-ká'mô I stick it *(ma'ká'mô* I stick)
ni-ra-máḥa I wet it *(nimaḥɛ* you are wet)
na-ra-ŋgɔ́ I carry it *(magɔŋgɔ́)*
ma-ra-k'ą̀'wį̀' I hide it *(mak'ą̀'wį̀')*
10. *gᵛ-*, *-gᵛ-* intransitive. Only a few clear-cut cases were found. In many cases it may however be surmized
gá'ni' to be full *(m-á'ni* he fills); *nando-g-á-yò* I wish to see *(ndayɔ* I see)
na-g-rigù (Tlo.) I walk *(na-rígu* I went down, I lower?)
ma-g-wiḥì he stands *(mawáḥą́* I stand)
ná-ŋga-nù·ᵘlɛ he arrives *(mu-na'à'lɛ̀* they arrive)
ma-ŋga-tă' he goes down *(mu-wată'* they go down)
má-gá-'ŋgɔ' I swallow *(mu-wá'ŋgɨ'* they swallow)
11. *-tsi-*, *-tse-*, *-tsa-* causative, transitive
ma-tse-ga I heat it *(mi-'ka* hot; *nákà* it is burning)
na-tsa-mɛ́·gɔ I bend it *(namɛ́·gɔ* I bend)
ma-tsa-miŋyù you frighten me *(ma-miŋyà'* you are frightened
na-ts-ɨ̨ḥwà' I bathe bim *(m-ɨ̨ḥwá* I bathe
12. *-pa-* causative, transitive
ma-pa-míga' I break it *(ni'-míga'* it is broken)
níni-pá-tíga I lost it *(ninda-tigà* he is lost)
13. *-tsí-* negative. Used only in the negative conjugation
tsí-yú I do not wish
ŋ̀-tsí-gúḥwa I do not sell
ŋ̀-tsí-ciyà I do not kill
14. *-n-*, *-ŋ-*, *-ni-* meaning not clear
ma'·n-dá'á I ask *(má'·ta-da'á'* you ask)
na-ŋ-gɔŋgɔ́ I carry *(ma-gɔŋgɔ́* I carry)
ma-ŋ-gogɔ I close *(ma-kógɔ* I close)
na-ŋ-gɛ̀'émbɔ́' I gather *(na-ta-gɛ̀'émbɔ́'* you gather)
na-ni-'nɔ̨́' I know *(na-ta-tsí'·nɔ̨́'* you know)
15. Meaning not clear. This is possibly only a variant of *-n-*
ma-rǫgwa I close *(marogɔ* I close)
maqucų́' I lift oneself *(nakúc·i* I lift)
16. *a-* Imperative singular
á-tagáyà' run!
à-tsù eat!
á-ŋᵛí' drink!
á-ḥyu' go!
a-tabià cry!

Stem Composition.

Although my data are rather scanty it seems fairly clear that stem composition is rather important. A few examples follow.

I. Verb + verb.

1. *-ndo-* to wish
na-ndo-gáyò I wish to see *(ndáyɔ* I see)
na-ndo-romátɔ I wish to open *(ma-mátó* I open)
na-ndo-gikù I wish to eat *(m-i·ku* I eat)
2. *-ka-* to go (Cf. also p. 47, No. 6)
ma-ka-káiyo' I carry *(káya'* I load)

II. *Verb + noun or adjective.* Either the noun is regarded as a predicate or as instrumental affix.

1. *mánì* to do. This is very extensively used with adjectives
mániba'à he makes large, augments *(ba'à* large)
mánìkú-bá' he makes dirty *(kùbà'* dirt)
mánì mâ'nì he fills *(gâ'nì* full)
2. *migú* I sit
migúmaḥą́' I feel well *(maḥą́'* well)
3. *ma'ŋgaŋ* I cough
ma'ŋgaŋ'ápu I cough *(ápu* my throat, neck)
4. *ní'ŋᵛɔ́'* side
nabaní·'ŋᵛɔ́' I move with my side
5. *è·djò'* head
·nabą̀-ìdjò' I move with my head
6. *nyą́ú'* hand
nabányą́u' I move with my hand

Verbal Suffixes.

Tlappanec possesses only a limited number of suffixes. The most important are the personal pronominal (Cf. pp. 53, 54) the demonstrative, reflexive, reciprocal, the instru-

mental and the plural (Cf. Formation of plural p. 52).

1. *-lè, -la.* Used as emphatic with certain verbs only
   náŋganù·ᵘ-lè he arrives
   natsi·kà·-lè he burns
   madɨ̨ɛ-la' I bury thee
   naŋgɛ̨'émbɔ̀-lè he gathers
2. *-ma, -marɛ* reflexive
   nuŋgà·mɛˤ-mare he climbed up (himself)
   mapatǔ·-mà I strike, collide
   nuŋgɛ́'ɨ̨'-ma he pitied himself
   mandjáˤ-ma' I grumble
3. *-mɛˤnɛ, -mɪna* reciprocal, reflexive
   nundadi-méˤnè they fight them
   naˤmaŋgáyi-méˤnè they move them
   nódà ˤ-mɪná-lú you (plural) pull it out
   natsúˤti-méˤnè they prick him
4. *-ˤma, -ˤmɛ, -ˤmɔ -mɪa, -me.* With, accompaniment
   magá-ˤma I go with you; *magá'-ˤmɛ̨'* I go with him
   midjá-ˤmɔ̨́ you go with me
   buˤ-mɪa-lúrɛ we eat with you (pl.)
   nakúˤ-mé-ka I eat with him

Formation of third Singular.

The third singular is characterized by having the low tone — occasionally the extra-low tone — on the final vowel. As we have seen on p. 46 — the terminal vowel of the stem frequently changes to *-è, -ì, -wì.* In a few instances it changes to *-a.* The third singular is further characterized by the loss of terminal glottal stop and the occasional nasalization of final vowel.

1. Change of terminal stem vowel to *-a*
   mawí-iyà' he extinguishes *(matatsí·yi'* you extinguish)
   makarì·yà he escapes *(makrînyǫ'* I escape; *mukɛrínyì'* they escape)
   nandatì·gà he disappears *(nandatigɨ̨'* I disappear; *nundatígɨ̨* they disappear)
2. Loss of terminal glottal stop
   mandja'ɔ́ he calls *(mandjá'ɔ́'* I call)
   manɨ̨ˤŋgɔ he crosses *(manɨ̨ˤŋgɔ'* I cross)
   mámbɔ̀ˤ he digs *(mámbɔ́'* I dig)
   makúdì he erases *(makúdi'* I erase)
3. Nasalization of final vowel
   nánigɨ̀ŋ' he likes *(nanígu'* I like)
   matsɔ́·ɛ̨́· he nails *(matsɔ́á'* I nail)

Formation of Third Plural.

The third plural is characterized by the almost invariable change of the vowel of the tense prefixes *ma-, na-, da-, ba-* to *-u-* or *-o-* and by the low or extra low tone on the final vowel. There are however a number of other traits that are frequently found. Just as in the third singular the terminal vowel of the stem changes to *-ɛ, -i, -wi, -a* and terminal vowels are nasalized. This latter process is quite frequent in the plural[1] and is commonly associated with verbs in *-u* or *-ɔ.* As we shall see later (cf. 53) this is the regular method for forming the third plural possessives of nouns.

1. Change of terminal vowel to *-ɛ*:
   muré-'nyɛ̨̃ˤ they answer *(maré·'nya* I answer)
   nunda'ɛ̃ˤ they ask *(ma·ndá'á* I ask)
   mŭpamɛ̀·gɛ̃ they break *(mapamíga'* I break)
2. Change of terminal vowel to *-a*:
   mutsamɛ̂·gàˤ they bend *(namɛ̂·gɔ* I bend)
   ndúyàˤ they know *(dáˤyɔ* I know)
   mŭnîˤŋà' they leave *(nánîˤŋᵛɔ́'* I leave)
3. Change of terminal vowel to *-i*
   mukì·ɛnì they get angry *(makíɛna* I get angry)
   nvŋgí·dìˤ they begin *(maŋgì·'dv* I begin)
   mvndí·yì' they blow *(mandí·yo'* I blow)
4. Dissimilation of terminal *-u, -ɔ* to *-wi*[2]
   murík͡wì they change *(marikù* I change)
   morígwìˤ they cut fruit *(marigú* I cut fruit)
   murɛˤk͡wìˤ they fall *(maruˤkɨ̀ŋ'* I fall)

[1] The nasalization of terminal vowel in the third singular is probably related to the frequent nasalization of terminal vowel found in the transitive conjugation.

[2] This is also found in other persons however. Cf. e. g. *matarikwì* you change and *marǫgwa* I close, *murogwã* they close. Clearly something else is involved here beside dissimilation of *-u, -o* to *-wi.*

5. Nasalization of final *-u*, *-ɔ*. Found prevailingly with static-neuter verbs
   mamákų̀' they amuse themselves
   nanım·bų̀ they believe
   manʔ'ŋgų̀ they cross
   mukán''ų̀' they die
6. Infixation of *-n-*
   nu'tị·nyų̃́ they are ashamed *(na'ti·yù'* he is ashamed)
   mogokɔ̀nyų̃́' they lift *(magɛ·kayɔ̀'* he lifts)
   'ndányų̀' they are necessary *('ndáyɔ̀'* he is necessary)
   mawąnḥwì they stand *(mawáḥų́* I stand)
   nûnıbá·ḥnyù they wake up *(nànibáḥyù* he wakes up)
7. Complete change of stem. This holds for all persons of the plural
   mù̀ḥnɛ̃ they bathe *(mų̀ḥwɛ'* he bathes)
   wan·í' they are big *(waḥų́'* I am big)
   núnì' they sleep *(ná·gwi'* he sleeps)
   nipái·tɛ' they bit *(nikúitá'* I bit)
   mupɔ́cpɛ̃ they chew *(mikúc·pɛ̀* he chews)
   napɔetsị they eat *(mikwi'* he eats)
   mupítcutù' they kiss *(mikwítcutɔ̀'* he kisses)
   níwɛ' they come *(nɛkɛ'* he comes)
   muwá'ŋgų̀' they swallow *(ma'gă'ŋgɔ̀'* he swallows)
   mąwícų̀ they urinate *(mamícù'* he urinates)
   nakú'ḥwɛ̃·' they go *(náctá'ɛ̃·'* he goes)
   makị' they are small *(taḥwị'* I am small)
   ná·ŋwà they drink *(ná·ŋà* he drinks)
   numvŋgáyị they swing *(napą́'ŋgą́'ì* he swings)
   nundáti they kill *(mací·yà'* he kills)

Formation of dual.

According to the older one of my two Tlappaneca informants the verb has both a dual and a plural, expressed by differences in the tone of the final vowel. The younger of my two informants did not apparently know these dual forms and was inclined to deny their existence. I obtained the following examples all in connection with a text.

[1] In a few cases like to bathe, to bite and to drink, the second singular shows the same irregularity as the plural.

magɛ̀ he goes; *mógɔ̀* they (two) go; *mógɔ̃́* they go
nackú'vŋgɛ̀' he pushes; *nɔckú'vŋgɛ̀'* they (two) push; *nuckú'vŋgɛ̃́'* they push
natɛ̀ he speaks; *nutɛ̀* they (two) speak; *nútɛ̃́* they speak
náŋa he drinks; *nú'wa* they (two) drink; *ná'ŋgwà* they drink

Irregular Verbs.

A large number of verbs are irregular either in the second singular or in all persons of the singular.

1. Loss of *-n-* in second singular
   matabɔ̃́'á you hide *(mambɔ̃́ɔ'* I hide)
   matagɛ̃́'m·bɔ̀ you join *(mąŋgɛ̃́'mbɔ̀* I join)
   natadŭ·uwa' you laugh *(nandŭ·uwa'* I laugh)
   matabí'í you light *(mambí'í* I light)
2. Change of *-k-* to *-dj-* or *-tc-*. This is possibly a contraction of second singular *-ta-* with *k*
   nìtsúita you bit *(nikúitá'* I bit)
   midjatcá'a you carry *(makakáiyo'* I carry)
   nidjá' you come *(níká'* I came)
   mi·'tsu you eat *(mi·'ku* I eat)
   mitsútcutɔ̀' you kiss *(mìkútcutɔ̀'* I kiss)
   mitsɔ̀c·pà you chew *(mikvc·pà* I chew)
3. Second singular in *-ra-*. It is difficult to decide whether this is a true pronominal prefix or *-ra-* transitive (?)
   maratsì you buy; *maracà'* you chew; *marată'* you defecate

In a few cases verbs with second singular *-ra-* have a prefix *-ŋgu-* in the first and third person singular.

marác'nʔ you count *(maŋgúc'nʔ* I count)[1]
maratá' you go down *(maŋgatá'* I go down)
maratʔ you hope *(maŋgŭ·'utʔ* I hope)

4. Second singular in *-tsi-*, *-tsa-*. This is probably simply the causative
   natsi'nduá' you cheat; *natatsa má'ni* you fill; *matsinúmá'* you pay

[1] Cf. however the 3rd plural *múrac·nʔ* and the Tlappaneco forms in the vocabulary.

5. Irregular in all forms

makat·á' I arrive; *mandjá'nù'* you arrive; *náŋganú·ʷlɛ̀* he arrives; *muna'à'lɛ̀* they arrive

maga' I drink; *mígʷį'* you drink; *magɨ̀* he drinks; *mɨ́'wà'* they drink

mi·ⁱku I eat; *mi·ⁱtsu* you eat; *mikwì'* he eats; *napɔ́tsɨ̀* they eat

nactá'ɧwą I go; *nacta'à'* you go; *nakǔ'ɧwɛ̰́·'* they go; *áɧyu'* go!

gú'ʷdá I owe (cf. also to have); *ctá'ᵃdá* you owe; *gɛ́'ᵃdɛ̀* he owes; *gwá'ᵃdɛ̀* they owe

mî'igʊ́' I dit down; *nandá'ɨ́, mara'ɨ́'* you sit down; *ná·ŋgî'ì'* he sits down; *nátigɨ̀* they sit down

ná·gú' I sleep; *ná·nú'* you sleep; *ná·gwì'* he sleeps

mawáɧɨ́ I stand; *manyáɧɨ́* you stand; *magwiɧì* he stands

The Adjective.

To all intents and purposes the adjective is really a static-neuter verb the only difference being that it possesses a number of characteristic noun prefixes[1].

1. *m-*

m-í'ica white	*m-í·ɨ́yu* blue (Tlo.)
m-í·'ka hot	*m-ác·a'* cool, cold
m-ác·á green	*m-í·'nu'* deep
ram-uɧɨ́ bad (not good)	*mi-ŋùwɔ* fresh
m-á'ni' full	*m-áyá'* red

2. *s-*[2]

sɔ-midíú dirty (I am)
s-kúnyɨ́' black (I am)

3. Conjugation of adjectives:

ikɨ́' waɧɨ́' I am big	*ikɨ́' taɧɨ́'* I am small
ikɨ́' you are big *waɧą*	*ikɨ́ą taɧwɨ́'* you are small
ikà waɧà he is big	*ikà taɧwɨ́'* he is small
ikɨ̀ wan·í' they are big	*ikɨ̀ makɨ̀'* they are small
ikɨ́' kubɔ́·' I am dirty	*ikɨ́' kaŋ'ɨ́'* I am clean
ikɨ́' you are dirty *kubɨ́·'*	*ikɨ́' kaŋ'wí'* you are clean
ikà kubà' he is dirty	*ikà káwì* he is clean
ikɨ̀ kúbɨ̀' they are dirty	*ikɨ̀ káɣwɨ̀'* they are clean

The Noun Stem.

All Tlappanec noun stems have two forms, the absolute, without possessive suffixes, and the non-absolute which possesses them. The absolute form undergoes certain transformations when the possessive affixes are added to it, change of tone of final vowel, contraction of final vowel of stem with possessive suffix and palatization of final consonant. In a number of cases the possessive suffixes do not contract with the terminal stem vowel. The Tlappanec noun has a plural and probably a dual.

1. Uncontracted forms

'yɔ· bed (abs.)	*tcí'ŋgrì* cricket (abs.)	*'ɪmbì'* excrement (abs.)
'yà·ò my bed	*tcí'ŋgrìù* my cricket	*'ɪmbɪù* my excrement
'yà·wà' your bed	*tcí'ŋgriá* your cricket	*ímbíà* your excrement
'yá·ò his bed	*tcí'ŋgriò* his cricket	*'ɪmbíò* his excrement
'yá·ɨ̨ their bed	*tcí'ŋgríɨ̨* their cricket	*'ɪmbíɨ̨* their excrement

2. Forms with palatalized terminal consonant

ckú' animal (abs.)	*á'kwą* ant (abs.)	*ndjáą'* buzzard (abs.)
ckíú' my animal	*á'kɪɨ̨'* my ant	*ndján·ɪù'* my buzzard
ckía' your animal	*á'kɪą̀'* your ant	*ndjá·n·ɪa'* your buzzard
ckíù' his animal	*á'kɪɨ̨* his ant	*ndjá·n·ɪò* his buzzard
ckíɨ̨ their animal	*á'kɪɨ̨* their ant	*ndjá·n·ɪɨ̨* their buzzard

ìdì' blood (abs.)	*ɛdɛ* head (abs.)
í·idjù' my blood	*è·djò'* my head
í·idjá' your blood	*è·djà·'* your head
í·idjù his blood	*é·djò'* his head
í·idjɨ̨ their blood	*é·djʒ* their head

[1] Cf. Sapir's treatment in his, "Hokan Affinity of Subtiaba", American Anthropologist N. S. Vol. 27, 1925, pp. 506ff. [2] More properly a noun prefix. Cf. pp. 52.

3. Contracted Forms[1]

tsùdù' back (abs.)	*djam·a* banana (abs.)
tsúdò' my back	*djam·ò'* my banana
tsúdá' your back	*djam·á'* your banana
tsúdò' his back	*djăm·ò'* his banana
tsúdį̀' their back	*djăm·į̀'* their banana
í·tsò bone (abs.)	*có·ctó* breast (abs.)
í·ts·ù' my bone	*có·ctò'* my breast
í·ts·a' your bone	*có·cta'* your breast
í·ts·ò his bone	*có·ctò'* his breast
í·ts·į̀' their bone	*có·ctį̀'* their breast

Nominal Prefixes.

Only *-a* few prefixes exist but these are very important for their relation to Subtiaba and Hokan[2]. The definitely known prefixes are , *d-*, *c-*, *k- (g-)*, *m-*, *s-* (rare).

1. *d-*, *r-*

d-á·ca grass *(m-ác·á* green)
da-tá'á' cough
dí-aḥ́ door
da-iya jug
rú'-ᵘdú mother
r-à-ų̀' my mouth
d-vmiò' navel
r-ákó' nose
d-rúbu pitahaya
d-ɛ̌'mà roof *(áḥmù* roof)
da-tá·ŋù smell
dă·-skà stench
r-índì·' green wood

2. *c-*

c-ó·ctò' my breast	*cu-gŭ·ŋba* bitch
c-u·ct·ų̀ anus	*c-tílá* chicken
ca-gàn·yǫ nail	*c-tį́·* clothes
c-kú' animal	*c-ŋndu* egg
c-gucta bat	*c-ta·ŋga* fat
c-ánà grass	*c-ıḥı'* horn
c-abò man	*c-úwí'* meat

3. *k-*, *g-*[3]

g-rùmiyo knee	*gi-tsį̀* fire
k-ùbà' dirt	*g-ítsį̀* game
k-ɛdɔ forehead *(ɛdɛ* head)	*g-íná* pain
k-àgù a load *(nàgù* I load Tlo.)	*g-à·yò* wise man

4. *m-*

m-íkú sea
m-ıca shade
m-ıcú' urine
m-i'nu wave

5. *s-*

s-ŋba dirt
s-trígì' fox
s-kí·n·ya' mucus
s-ka ulcer

6. *n-* agentive nominalizer
n-ákwí' eater; *n-á'pì'* eaters
n-á'ya' drinker; *n-ú'ywà'* drinkers

Formation of Plural.

The formation of the absolute plural is somewhat irregular but generally it consists in the change of the terminal vowel or — in the case of disyllabic stems — of both vowels, to low or extra low tone. The third plural of the possessive is regularly formed by *-ų̀ -į̀* either added to the stem or contracted with final vowel (Cf. pp. 53). The dual — which must still remain somewhat doubtful — is formed from the singular absolute by change of tone.

1. Plural absolute:

nyù'ù birds	*(nyu'ų* bird)
ndjáà' buzzards	*(ndją́ą'* buzzard)
ìnyà caves	*(ìnya* cave)
ndų̀ clouds	*(dų̀* cloud)
dìaḥ́ų̀ deer	*(dìaḥ́į* deer)
ıdų̀ eyes)	*(ıdò* eye)
ɛdɛ̃ heads	*(ɛdɛ* head
í·nyà' holes	*(í·nyá'* hole
gú·ᵘwà houses	*gú'wá* house)
dáiyà' jars	*(daiya* jar
ín·à' leaves	*(ín·á* leaf)
cabɔ̀ men	*(cabɔ* man)
apù neck	*(ápù'* neck)

[1] In a few cases the second singular does not contract. e. g. *ndjaḥ́wa*, your brother; *ndjáḥ́ɔ*, my brother; *ágwá'*, your light; *á·gú'*, my light.

[2] Cf. Sapir (Ibid.) pp. 495ff. and his comparative vocabulary (Ibid.) pp. 405ff.

[3] Cf. pp. intransitive prefix g^v- and Sapir (ibid.) 515ff.

2. Third plural possessive. This is *-ų̀* the regular plural in Subtiaba[1]. In a few cases *-nyų̀* is found.

yɔ́ų̀ their maguey
ídíų̀ their lime
ín·ų̀ their leaf
grùmiqų̀ their knees
a·'yyų̀ their iguanas
ínyų̀' their hole
y·ų̀' their honey
yáḥnᵛù' their louse
cúnyų̀ their meat
dányų̀ their jug
ceḥínyù' their horn

3. Dual absolute.

cabɔ̀ man (sing.); *cabɔ* (dual); *cabɔ̃* (pl.)
tsų̀ skin (sing.); *tsų* (dual); *tsų̃* (pl.)
ítsí' stone (sing.); *itsi* (dual); *ítsì* (pl.)
ící tree (sing.); *ıcı* (dual); *ìcì* (pl.)

Personal and Possessive Pronouns.

The pronominal system is very simple. There is a dual only in the third person of independent personal pronoun. The first and second singular and plural are clearly connected with the independent forms. Owing to the extreme irregularity of the Tlappanec verb it is not always easy to determine the exact nature of the pronominal affixes in all cases but it is safe to assume that the endings found in the adjective conjugation and in the declension of the nouns represent their true form. For examples of the preceding pages.

1. Independent personal pronouns.

íkų́' I
íkɑ́ thou
ìkà' he she
ikálú we
ikàlà you
ikį̀ they (dual)
ikį̀ they

[1] Lehmann, Ibid 919ff.

2. Affixed personal pronouns: Used only with static-neuter verbs.[1]

-o, -u, -ɔ, -v, -ɔ̨, -ų first singular[2]
-a second singular
-ò, -ù, -ɔ̀, -ɔ̀ third singular
-lú first plural
-là second plural
-ų̀, -ų̀, -ų̀, -ų̀, -nyù, nyų̀ third plural

3. Independent possessive pronouns.[3]

kwéntɔ mine
kwéntá' thine
kwentɔ̀' his
kwéntálú' our
kwéntàlà your
kwéntų̀ theirs

The Transitive Conjugation.

It is impossible, on the basis of the material secured, to bring any order into the nature of the pronominal endings of the subject-object conjugation. All that it seems warranted to say is that both the pronominal subject and object find partial expression n the terminal vowel of the stem.

1. I-you. The terminal vowel generally changes to *-a* and this *-a* may be nasalized and always is followed by a glottal stop. This *-a* is manifestly the second singular pronominal affix

masíŋgɑ́' I show you	*(masíŋgɔ̀* I show him)
nackú'ŋŋgɑ́' I push you	*(macgǔ'úŋgà'* I push him)
marɛ̂'nya' I answer you	*(maré·'nya* I answer him)
maˈmbra'ą́' I cover you	*(mąmbra'ų́'* I cover him)
manî'ŋᵛɑ́' I leave you	*(nanı'ŋᵛɔ́* I leave him)
nac·ná' I give you	*(nac·ná'* I give him)
narutų̀ˈ I cut you	*(marútù'* I cut him)
narakwį̀' I untie you	*(narakú* I untie him)

[1] The only affix found with the active-transitive verb is the prefix *ta-* which has been mentioned before.

[2] I am not indicating the tones.

[3] The affixed forms are identical with those of the static-neuter verb.

2. You-me. All these forms have the second singular prefix *-ta-* or *-ra-* and the overwhelming majority end in *-u'* or *-ų'*. In a number of cases the *-u'*, *-ų'* is added to the stem and does not fuse with the terminal vowel

nara·c·nų' you give me (*nac·ná'* I give him)
maranʸù' you wash me (*má·ˈnʸà* I wash him)
natackú'vŋgų' you push me (*macgú'vŋgà'* I push him)
matakúcǫ' you lift me (*makú·cì* I lift him)
natrutiǫ' you cut me (*narútù'* I cut him)
natá'mbru'ų you cover me (*mą'mbra'ų́* I cover him)
naratʸ'ų you seize me (*naʷwatų* I seize him)
matatú'ų you hang me (*mata'á'* I hang him)
naratsìy' you buy me (*matsì* I buy him)
natsinų̀ų you know me (*nani'nų́'* I know him)

3. He-me. The ending is either *-ų* (*-ų́', -ǫ́'*) or *-ę́'*

natų́'ų he seizes me (*maʷwatų* I seize him)
natsų́'ų' he bathes me (*mų̀hwá* I bathe him)
makúcų' he lifts me (*makú·cì* I lift him)
maru'tíų̀' he cuts me (*marú'tù'* I cut him)
na'mbru'ų̀' he covers me (*mą'mbra'ų́'* I cover him)
nackú'vŋgų́' he pushes me (*macgú'vŋgà'* I push him)
maŋgétę́' he expects me (*maŋgú·ʷtú* I expect him)
nac·né' he gives me (*nac·ná'* I give him)
nɛnéʸŋʸɛ́' he leaves me (*naniˈŋʸɛ́'* I leave him)
nasıŋgè he shows me (*masıŋgɔ̀* I show him)
marácá' he asks me (*maráci* I ask him)
mare·'nyá' he answers me (*maré·'nya* I answer him)

4. He-thee. The ending is prevailingly either *-à'* or *-ų́'*

naró·ʷwà' he ties you (*marɔɔ'* I tie him)
nacamátų̀' he pulls you (*macámátá* I pull him; *macámátá'* I pull you; *natac·mátų́'* you pull me; *nacamátų* he pulls me)
natsų́'wà' he bathes you (*matatsų́wà'* I bathe you)
mi·ŋyà' he frightens you (*mamí'ŋyù'* I frighten you)
na'mbra'à' he covers you (*ma'mbra'ą'* I cover you)
nɛníyʸà' he leaves you (*manî'ŋʸą́* I leave you)
natų́wų́ he seizes you (*magwatų* I seize you)
makúcų́ he lifts you (*makú·cì* I lift him; *makúcų́* I lift you)
naninų̀wų́', he knows you (*naninų́wų́'*, I know you)
narutį́' he cuts you (*narutį́'* I cut you)
narací' he asks you (*maráci* I ask you)
maŋgétè' he expects you (*maŋgúʷtą'* I expect you)
mare'nyɛ́' he answers you (*maré·'nya* I answer you)

5. They-them. There is no characteristic vowel ending. The vowel of the prefix, of course, always changes to *-o*, *-u*

nutų́wų́ they seize them
nurú·wǎ they tie them
mí·ŋyǎ' they frighten them
nɔtsų́'wǎ' they bathe them
nutá'į́' they hang them
nutsɪ́' they buy them
nuru'tɪ́' they cut them
nu'mbra'ǎ' they cover them
muckú'uŋgį́ they push them

Relationship of Tlappanec to Subtiaba and Hokan.

The relationship of Tlappanec to Subtiaba is so close both lexigraphically and grammatically that they must be considered dialects of the same language[1]. Briefly tabulated the morphological resemblances are as follows[2]:

	Subtiaba	Tlappanec	Hokan
1. present tense	*na-*	*na-*	
2. present tense	*ma-*	*ma-*	
3. present tense	*do-*	*da-*	
4. perfective tense	*ni-*	*ni-*	
5. future tense	*ga-*	*ga-*	
6. imperative	*da-*	*a-*	

[1] There are a few sound shifts: Tlappanec *ts-* becomes Subtiaba *s-* and Tlappanec *c-* frequently changes to Subtiaba *r-* or *r-*. Cf. vocabulary for examples.

[2] Cf. Sapir (ibid.) pp. 491—524 and Lehmann (ibid.) pp. 933—939).

	Subtiaba	Tlappanec	Hokan
7. intransitive[1]	*g-*	*g^{v}-*	*k-*
8. adjective-intransitive	*m-*	*m-*	*m-*
9. adjective	*s-*	*s-*	*s-*
10. transitive	*da-*	*ra-*	*t-*
11. transitive-causative		*pa-*	*p-*
12. transitive-causative	*s-, c-*	*-ts^{v}-*	*s-*
13. nominal (abs.)	*d-*	*d-*	*t-*
14. nominal (abs.)	*r-*	*c-*	*l-*
15. nominal (abs.)	*s-, c-*[2]	*s-*	*s-*
16. nominal (abs.)		*k-*	*k-,ki*
17. nominal (abs.)		*na-*	*n(a)*
18. plural	*-n^{v}u, -nu*	*-ɛ ,-nyu*	
19. possessive affix, I	*-u*	*-u*	
20. possessive affix, you	*-a*	*-a*	
21. pronominal suffix, we	*-lu*	*-lú'*	
22. pronominal suffix, you (pl.)	*-la*	*-là'*	
23. demonstrative suffix	*-la*	*-lɛ*[3]	

English-Tlappanecan Vocabulary.

The following abbreviations are used:

abs. = absolute
fut. = future
intr. = intransitive
pl. = plural
pt. = perfective
sing. = singular
Sp. = Spanish
Sub. = Subtiaba
tr. = transitive
Tlo. = Tlappaneco

[1] From here on till 18 (cf. p. 51) I follow Sapir's analysis. After that I follow Lehmann again.

[2] Subtiaba *r-* and *c-* have clearly fallen together in Tlappanec.

[3] This is probably cognate with Lehmann's nominal suffix *-lu*. Lehmann's equation of this *-lu* with Tlappanec *-lú·* is quite incorrect. *-lų́·* in Tlappanec is simply "our" and is never used in any other sense.

The numbers in brackets, (1), (2), (3) indicate first, second and third persons respectively. The verb is always given in the present.

to be able, *ná·gɔ́·* Stem does not change
above, *de·ʻma-lu* (Squier, sky)
above, *tsúdù*; — Sub. *gi-tšu*
across, *kìdì; — sudì* (Tlo.); — Sub. *rundi*
adobe, *gá·k·u'*
afterwards, *dà·wà*
again, *bɔḥɔ̀*
aguacate, *dúdí'* (abs.); *dúdió'* (1); *dúdiá'* (2); *dúdió'* (3); *dúdíų'* (3 pl.); — Sub. *duti*
air, *ŋgíyá'*; — Sub. *ŋiŋa*
all, *ká·mbáʻ*; — Sub. *da-kimba* (Aragon, beaucoup)
alligator, *i'kùʻ* (abs.); *íkíu'* (1); *íkía'* (2) *i'kiù'* (3); *i'kiį́'* (3 pl.)
also, *ki·ma*
amuse oneself, *mamak·ɔ'* (1); *mamak·wá'* (2); *namak·ɔ̀'* (3); *mamákų́'* (3 pl.)
get angry, *makíénɔ* (1); *makíéna* (2); *makí·nà* (3); *mukí·ɛnì* (3 pl.)
animal, *ckú'* (abs.); *ckíú'* (1); *ckíá'* (2); *ckíù'* (3); *ckíį́'* (3 pl.); — Sub. *ruxku*
annoy, *nani má·'ska* (1)
answer, *maré·'nya* (1); *matré·'nya* (2); *maré·'nyɛ́'* (3); *muré·'nyɛ̀'* (3 pl.); *maré·'nya'* (I-thee); *matré·'nyo'* (thou-me); *maré·'nyá'* (he-thee); *maré·'nyɛ́'* (he-me)
ant *,á'kwą* (abs.); *á'kų́'* (1); *á'kų̀'* (2); *á'kų́'* (3); *á'kų́'* (3 pl.); — Sub. *axkua*
anus, *cuc·tį́'* (abs.); *cuctį́'* (1); *cuctį́'·wà'* (2); *cuctį́'* (3); *cuctį̀'* (3 pl.); — Sub. *ga-ctug* (Squier)
armadillo, *ŋgá'*; — *gá'* (Tlo.)
arrive, *makat·á'* (1); *mandjá'nù'* (2); *náŋganù·^{u}lɛ̀* (3); *muna'à'lɛ̀* (3 pl.)
around, *kí·djù^{u}*
arroyo, *matà'*
be ashamed, *na'tiyu'* (1); *na'ti·yá'* (2); *na'ti·yù'* (3); *nu'tį·nyį́'* (3 pl.); — Sub. *na-ctiya*
ashes, *ídí'*; — Sub. *idu*
ask, *marácí'* (1); *matrácì* (2); *márácì'* (3); *núrácį́'* (3 pl.); *naracà'* (I-thee); *natracò*

(thou-me); *marácá'* (he-thee); *narácí'* (he-me)

ask, beg, *ma·ndá'á* (1); *má·tada'á'* (2) *má·nda'è·'* (3); *nánda'ɛ̃'* (3 pl.); — Sub. *na-va-a·dɔ* (fragen)

at the foot of, *ctu̯*

atole, *ŋgu̯wu̯* (abs.); *ŋgu̯u̯'* (1); *ŋgu̯·wa'* (2); *ŋgu̯u̯'* (3); *ŋgvu̯'* (3 pl.); — Sub. *gua-lu*

augment, *mánìba'à* (he makes large)

aunt, *nín^{v}o'*

keep awake, *natsò (1); natsà' (2); natsò' (3); natsu̯* (3 pl.); — Sub. *gɔ-cɔ* (wake up)

back, *tsùdù'* (abs.); *tsúdù'* (1); *tsúdá'* (2); *tsúdù'* (3); *tsúdu̯'* (3 pl.)

be bad (not good), *ra-muḥú'* (1); *ramaḥú'* (2); *ramaḥá'* (3); *ramaḥi̯'* (3 pl.); — Sub. *mi·xn^{v}a* (good)

badger, *ŋgù*

banana, *djam·a* (sing.); *djàm·à* (pl.); *djam·ɔ́'* (1); *djam·á'* (2); *djám·ɔ'* (3); *djám·u̯'* (3 pl.)

bat, *cguc·ta*

bathe (intr.), *mu̯ḥwá* (1); *mì·nà'* (2); *mu̯ḥwè'* (3); *mùḥnálú* (1 pl.); *mùḥnàlà* (2 pl.); *mùḥnɛ̃·* (3 pl.); — *mu̯wá* (1 Tlo.); *nqgu̯wá* (2 Tlo.); *nqwá* (3 Tlo.); *narúwu̯* (3 pl. Tlo.); — Sub. *na-gu·va*

bathe (tr.), *natsu̯wà'* (I-thee); *matatsu̯'u̯'* (thou-me); *natsu̯'i̯'* (he-me); *natsu̯wā'* (he-thee); *nɔtsu̯wā'* (they-them)

be, *n^{v}áḥu̯* (1); *n^{v}áḥwa'* (2); *n^{v}áhi̯* (3); *n^{v}áḥi̯* (3 pl.)

be so, *ma'nijúkì'*

bean, *yó·ḥɔ́'* (1); *yáḥá'* (2); *yɔḥɔ* (3); *yɔḥɔ̃* (3 pl.); — Sub. *ŋaha*

because, *numŭ*

bed, *'yɔ·* (abs.); *'yà·ò* (1); *'yà·wà'* (2); *'yá'ò* (3); *'yá·i̯* (3 pl.); — *ìcì 'yɔ·* (Tlo.); — Sub. *ɔŋɔ*

begin, *maŋgí·'dv* (1); *natagí·dv* (2); *naŋgí·dì* (3); *nvvgí·dì'* (3 pl.); — *nagí'du* (1 Tlo.); *natagí'di* (2 Tlo.); *nagídu* (3 Tlo.); *nagídi̯* (3 pl. Tlo.); — Sub. *na-gi·tu*

believe, *nanɛm·bɔ́'* (1); *nanɛm·bà'* (2); *nanɛm·bɔ̀'* (3); *nanım·bi̯'* (3 pl.); — *natɔáŋkvɨ* (1 Tlo.); *natɔáŋkvià* (2 Tlo.); *natɔáŋkvi̯* (3 Tlo.); *natɔáŋkwi̯* (3 pl. Tlo.)

below, *bàyì'*; — Sub. *ba·i-lu*

belt, *cimídv'*; — Sub. *tatɔsma* (?)

bend, *namɛ̃·gɔ, natsamɛ̃·gɔ* (1); *matsamɛ̃·ga* (2); *matsamɛ̃·gɔ̀* (3); *mutsamɛ̃·gà'* (3 pl.); *mutsamɛ̃·gá'lú'* (1 pl.); *mutsamɛ̃·gàlà'* (2 pl.); — *nitsamɛ̃·gɔ* (1 pt.), etc; — *natsimígą'* (I-thee); *natatsimígu̯'* (thou-me); *natsimígi̯'* (he-me); *natsimígą̀'* (he-thee); *nutsimígà* (they-them); — *nas·mbígo* (1 Tlo.); *nas·mbíga* (2 Tlo.); *nas·mbígò* (3 Tlo.); *nas·mbígǒ* (3 pl. Tlo.)

bird, *nyu'u̯* (sing.); *nyŭ'ŭ* (pl.); *nyú'u̯* (1); *nyú'u̯wá'* (2); *nyu'i̯* (3); *nyu'i̯* (3 pl.); — Sub. *n^{v}u·u*

bitch, *c^{u}gŭ·ŋba* (abs.); *c^{u}gŭ·ŋbió'* (1); *c^{u}gŭ·ŋbiá'* (2); *c^{u}gŭ·ŋbiò* (3); *c^{u}gŭ·ŋbi̯* (3 pl.)

bite, *nikúitá'* (1); *nitsúitá'* (2); *nìkúìtè* (3); *nipúitálu'* (1 pl.); *nipúitàlà'* (2 pl.); *nipúitɛ̃'* (3 pl.); — *mikúitą̃'* (I-thee); *mitsúitą̃'* (thou-me) *mikúitį̀'* (he-me) *mikúitą̀'* (he-thee); *mapúitamɛ́'nè* (they-them) *mikúitį̀'* (I-them); *mitsúitį̀'* (thou-them); *mìkúiwítɨ̀* (he-them)

be black, *skúnyu̯'* (1); *skúní'* (2); *skunì'* (3); *skunɨ̃'* (3 pl.)

be blind, *ductán^{v}qḥú* (1); *ductán^{v}qḥwa'* (2); *ductán^{v}qḥù'* (3); *ductán^{v}qḥi̯'* (3 pl.); — Sub. *du·cta*

blood, *idì'* (abs.); *í·idju'* (1); *í·idjá'* (2); *í·idjù* (3); *í·idji̯* (3 pl.); — Sub. *ae'di*

blow, *mandí·yo'* (1); *matadí·yi'* (2); *mandí·yù* (3); *mundí·yì'* (3 pl.); — Sub. *na-da·ndi*

blue, *ŋgì·dì'*; — *mí·iyu* (Tlo.)

boar, *agacána*; — Sub. *si·n^{v}ui* (jakali)

boil, *daḥì, baḥì* (1); *natáḥi'* (2); *dáḥì* (3); *dŭḥì* (3 pl.)

bone, *í·tsò* (abs.); *í·ts·ù'* (1); *í·ts·a'* (2); *í·ts·ɔ̀·* (3); *í·ts·i̯'* (3 pl.); — Sub. *i·su·*

boy, *a·dà'*

break, *mapamíga'* (1); *matapamíga'* (2); *mapamɛ̃·gɛ̀'* (3); *mŭpamɛ̃·gɛ̃* (3 pl.); — *nipamígá'* (1 pt.); *nındápamigá'* (2 pt.); *nipámegè* (3 pt.); — *ni'mígá'* (it is broken)

break (Sp. romper), *mackúitu'* (1)

breast, *cɔ́·ctɔ́* (abs.); *cɔ́·ctɔ̀'* (1); *cɔ́·cta'* (2); *cɔ́·ctɔ'* (3); *cɔ́·ctu̯'* (3 pl.); — Sub. *sɔstɔ, sɔctɔ*

breathe, *baiyál-acv'* (1); *aiyál-aca'* (2); *diyálecɔ* (3); *diyálecɣ* (3 pl.); — Sub. *na-ɔca*
broad, *ɧwàpa*
brother, *ndjáɧɔ* (1); *ndjaɧwà'* (2); *ndjaɧô·* (3); *ndjaɧɣ* (3 pl.); — Sub. *tcɔa*
burn, *matsí·ka* (1); *matátsí·ka* (2); *matsí·kè, natsi·kà·lè* (3); *nutsékɛ̃'* (3 pl.); — *níkà* (it is burnt); *náká'* (it is burning)
bury, *mádù'u* (1); *mátadù'* (2); *má·dùlè* (3); *múdùlè* (3 pl.); *atádɣ'* (imp.); — *madɣela'* (I-thee); *matadɣ-ela'* (thou-me); *madùelè'* (he-me); *madùelè'* (he-thee); *mudúelè'* (they-them); — Sub. *na-i-du·*
buy, *matsì* (1); *maratsì* (2); *matsì'* (3); *mùtsì'* (3 pl.); — *matsɣ'* (I-thee); *naratsiɣ'* (thou-me); *matsíɣ'* (he-me); *natsɣ'* (he-thee); *nútsɣ'* (they-them); — *natsì* (1 Tlo.); *narátsì* (2 Tlo.); *nàtsì* (3 Tlo.); *nótsì* (3 pl. Tlo.); — Sub. *na-si·*
buzzard, *ndjáɣ'* (abs.); *ndján·ıù'* (1); *ndjá·n·ıa* (2); *ndjá·n·ıɔ* (3); *ndjá·nıɣ* (3 pl.); *ndjáɣ'* (pl.)
call (Sp. llamar), *mandjá'ɔ'* (1); *natadjá'ɔwá* (2); *mandja'ɔ́* (3); *nundjá'ɣ* (3 pl.); *nundjá'ɣ* (they-them); — Sub. *na-ntcao·, na-tcao·*
carry, bring (traer), *makakáiyo'* (1); *midjatcá'a* (2); *makékáyo'* (3); *mogwékuɣɣ* (3 pl.); — *nikagáiyó'* (1 pt.); *nidjatcá'* (2 pt.); *niwakó·iyalu'* (1 pl. pt.); *niwakó·iyùlà'* (2 pl. pt.); *mikwekó·nyɣ'* (3 pl. pt.); — Sub. *na-gaɣa·a*
carry (Sp. acarrear), *naŋgɔŋgɔ́, magɔŋgɔ́* (1); *naraŋgɔ́, rarɔŋgɔŋgɔ́* (2); *naŋgɔŋgɔ́* (3); *nunduŋgɔ́* (3 pl.); — *nɨgɔŋgɔ́* (1 pt.); *nɨdaŋgɔ́, niraŋgɔ́* (2 pt.); *nɨgɔŋgɔ́* (3); *niraŋgɔ́'* (3 pl.); *niraŋgó·lu* (1 pl. pt.); — *nagóŋgu* (1 Tlo.); *naráŋgu* (2 Tlo.); *nagɔŋgò* (3 Tlo.); *naráŋgù* (3 Tlo.)
cat (Aztec loan-word), *míctɣ* (abs.); *míctíɣ'* (1); *míctíą'* (2); *míctíù* (3); *mıctíɣ* (3 pl.)
cave, *ìnya* (sing.); *ìnyà* (pl.)
certain, *akɣ́; mìkɣ́·wɨ* (it is certain)
change, *marikù* (1); *matarikwi, marikù* (2); *marikwì* (3); *murikwɣ* (3 pl.); — *narikù* (1 Tlo.); *natríku* (2 Tlo.); *narikù* (3 Tlo.); *natríkwì'* (3 pl. Tlo.)
cheat, *mani'nduá'* (1); *natsi'nduá'* (2); *naní'ndúè* (3); *nuní 'nduwɛ̃* (3 pl.); — *mani'ndúwą'* (I-thee); *masi'ndu'ɣ'* (thou-me); *mani'ndú·ɣ'* (he-me); *mani'ndúwè'* (he-thee); *nuni 'ndúɣ'* (they-them)
chew, masticate (Sp. mascar), *mikuc·pà* (1); *mitsɔc·pà* (2); *mikúcpɛ̀* (3); *mupúcpàlà* (2 pl.); *mupúcpɛ̀* (3 pl.)
chew, suckle (Sp. chupar, mamar), *mà·ᵃcù'* (1); *maracà'* (2); *má·cù'* (3); *mó·cù'* (3 pl.); *ni'cú'* (3 pt.); — Sub. *na·-cu·*
chicken, *ctílá'* (sing.); *ctílà* (pl.); *ctílíu'* (1); *ctılıá'* (2); *ctíllù* (3); *ctılíų* (3 pl.)
child, *ada ta·'wɨ'*; — Sub. *a·da-ɣu*
church, *djakɣ́*; — Sub. *tcakuhi* (Aragon)
be clean, *kaŋ'ɣ́'* (1); *kaŋ'wí'* (2); *káwì* (3); *káɣwɨ'* (3 pl.)
climb, *maruŋ'u* (1); *matrvŋ'à* (2); *marv'ɔ̃ŋ'* (3), *motam·ì'* (3 pl.)
close, *marǫgwa, maŋgɔgɔ, makógɔ, marógɔ* (1); *matrogá', matrogwà'* (2); *maróg̀ɔ* (3); *murogwà* (3 pl.); *kɔgɔ̀* (it is closed); — *narógo'* (1 Tlo.); *natrúgwa'* (2 Tlo.); *narogò'* (3); *narugwà* (3 pl.); — Sub. *na-do·kɔ*
clothes, *ctɨ́·* (abs.); *ctín·yó'o* (1); *ctín·yá'* (2); *ctín·yù* (3); *ctín·yɨ́* (3 pl.)
cloud, *dɨ́* (sing.); *ndɨ́* (pl.)
coal, *a·m·bù*; — *rútá'* (Tlo.)
be cold, *nakarámu* (1); *nakarámá'* (2); *nakarámù'* (3); *nukarámù* (3 pl.)
come, *níká'* (1 pt.); *nidjá'* (2 pt.); *nɛkɛ̀'* (3 pt.); *nɨ́ᵘwá'lá'* (1 pl. pt.); *niᵘwà'là'* (2 pl. pt.); *níygowè, níwɛ̀'* (3 pl. pt.); — Sub. *nᵘaa, na-tca*
cook, *ná'gá'* (1); *ni'gáma'* (it is cooked); — Sub. *na-daxkua* (?)
cool, *manimác·a'* (1); *matánimác·a'* (2); *manimac·àlɛ* (3); *núnimac·àlɛ* (3 pl.)
cough, *ma'ŋgaɣ́'ápu* (1. cough-my-throat); *ma'ŋgaɣ́'apá* (2); *ma'ŋgaɣ́'apù* (3); *ma'ŋgaɣ́'apɣ́'* (3 pl.)
corn-field, *jac·tɔ* (abs.); *jàc·tɔ̀* (1); *jàc·tá'* (2); *jac·tɔ̀* (3); *jactɣ́* (3 pl.)
cotton, *mu·gu*; — *mùgu* (Tlo.); — Sub. *mu·gu*
cough, *datá'á'*; — Sub. *gi-ndistaa*
count, *maŋgúc'nɣ́* (1); *marác'nɣ́* (2); *maŋgúc'nɣ́*

(3); *múrac·nɨ̨* (3 pl.); — *nagúc·nu* (1 Tlo.); *natrúc·nu, narúc·nu* (2); *narúc·nì, nagúc·nì* (3)

cover, *mąʻmbraʾą́ʾ* (1); *mąʻmbraʾą́ʾ* (2); *nąʻmbrǎʾàʻ* (3); *mąʻmbráʾìʻ* (3 pl.); — *maʻmbraʾąʾ* (I-thee); *natáʻmbruʾɨ̨ʾ* (thou-me); *naʻmbruʾɨ̨̀ʾ* (he-me); *naʻmbraʾàʾ* (he-thee); *nuʻmbraʾàʻ* (they-them); — *narúgo* (1 Tlo.); *natrúgwa* (2 Tlo.); *narógò* (3 Tlo.); *narugwǎ* (3 pl.)

creep, crawl, *macamátá* (1); *natacamátá* (2); *macamátǎ* (3); *muc·mátǎʻ* (3 pl.); — *nacamatàʾ* (I-thee); *natac·matɨ́ʾ* (thou-me); *nacamatɨ̨̀ʾ* (he-me); *nacamátą̀ʾ* (he-thee); *nucamátǎʾ* (they-them); *nac·mátáʾ* (1 Tlo.)

cricket, *tcíʾŋgrì* (abs.); *tcíʾngrìù* (1); *tcíʾŋgriá* (2); *tcíʾŋgríɨ̨* (3 pl.); *tcíʾngriò* (3)

cross, *manɔ́ʻŋgɔʾ* (1); *manɔ́ʻŋgwàʾ* (2); *manɔ́ʻŋgɔ̀* (3); *manóʻŋgɨ̨* (3 pl.); — Sub. *nanɔŋgv*

cry, *mąmbìyaʾ* (1); *natabìyaʾ* (2); *nambéyɛ̀ʾ* (3); *nɔmbéyɛ̀ʾ* (3 pl.); *átabiàʾ* (imp.) — Sub. *na-mbì·ɨ̈-a*

curse, *matáckawiʾ* (1); *maratackawiʾ* (2); *matackawiʾ* (3); *mutackuyeʾ* (3 pl.)

cut (fruit), *marigú* (1); *matrigú* (2); *marigwìʻ* (3); *morígwɨ̨ʻ* (3 pl.); *trígu'dìgì* (imp.)

cut (wood), *maruʻtùʻ* (1); *matruʻtùʻ* (2); *maruʻtìʻ* (3); *muruʻtì·ʻ* (3 pl.); *naruʻtúlúʾ* (1 pl.); *naruʻtùlàʾ* (2 pl.); *niruʻtù* (1 pt.); *nikarutu* (1 fu.); *nitĭ* (it is cut); — *narutɨ̨ʻ* (I-thee); *natrutɨ̀ɨ̨ʾ* (thou-me); *narutɨ́ɨ̨ʾ* (he-me); *narutɨ̨̀* (he-thee); *nurutɨ̀ʻ* (they-them); — *narutɨ́* (1 Tlo.); *narútɨ́* (3 Tlo.); — Sub. *na-di·i*

dance, *masŋ'a* (1); *marasŋ'a, mandasŋ'a* (2); *másŋ'è* (3); *mǔ·sŋ'è* (3 pl.); — *ná'sya* (1 Tlo.); *narásya* (2 Tlo.); *ná'syà* (3 Tlo.); *núsyá* (3 pl. Tlo.); *rásyeka* (imp. Tlo.)

dark, *kíná*; *nanikíná*, it is getting dark

to dawn, *nátsíʻ*

day, *bíʾì*; — Sub. *bii·*

deaf, *ckurêʾo*ʾ

deep, *mí·ʻnuʾ*; — Sub. *mixnu*

deer, *áyáʾ* (abs.); *áyıuʾ* (1); *áyıàʾ* (2); *áyıòʻ* (3); *áyıɨ̨* (3 pl.); — Sub. *rɛ̄xnᵛu*

defecate, *matǎʻ* (1); *maratǎʻ* (2); *mátǎ* (3); *mútǎ* (3 pl.)

delicate, *rú·dúʾ*

devil, *gicào*

die, *makánᵛoʾ* (1); *makánᵛaʾ* (2); *makánᵛòʾ* (3); *mukánᵛɨ̨ʾ* (3 pl.); — *íkɨ́ʾ* *máni ŋgwa makánᵛoʾ* (I cause-him that he dies); — Sub. *na-ganᵛu*

different, *barigúkóʾ*

dig (Sp. escarbar), *màndì·* (1); *matàn·dì·* (2); *mándì* (3); *mǔn·d·ìʻ* (3 pl.); — Sub. *nanandi*

dig (Sp. cavar), *mámbóʾ* (1); *mámbáʾ* (2); *mámbɔ̀ʻ* (3); *mámbɨ̨̆* (3 pl.); — *wámbo* (1 Tlo.); *wámbà* (2 Tlo.); *ᵘwámbò* (3 Tlo.); *ᵘwámbɨ̨̀* (3 pl. Tlo.)

directly, *m̀bòkamúmaʾ*

dirt, (Sp. suciedad) *ʾambaʻmǔʻ*

dirt, filth (Sp. mugre), *sɱbá* (abs.); *sɱbɔ* (1); *sɱbàʾ* (2); *sɱ̀bɔ̀* (3); *sɱ̀bɨ̨̀* (3 pl.); — Sub. *amba* (excrement)

dirt (Sp. lodo), *kùbàʾ* (abs.); *kòbò* (1); *kòbàʾ* (2); *kòbɔ̀ʾ* (3); *kòbɨ̨̆ʾ* (3 pl.)

be dirty (Sp. sucio), *kú·bą́·ʻ* (1); *kú·bą́·ʻ* (2); *kú·bàʾ* (3); *kú·bɨ̨ʻ* (3 pl.) — Sub. *gu·pa·*

dirty (Sp. sucio), *tségà*

make dirty, *mǎnìkú·báʾ* (1); *matánikúbáʾ* (2); *mǎnìkúbɛ̀ʾ* (3); *mǔnìkúbɛ̄ʾ* (3 pl.); — Sub. *ra·gu·ba*

disappear, *nandatigɨ̨ʾ* (1); *nandatigɨ̨̀ʾ* (2); *nandatí·gàʾ* (3); *nvndatígɨ̨* (3 pl.)

distribute, *mác·naráʾàʾ* (1); *nándac·naráʾàʾ* (2); *nác·naráʾɛ̄ʾ* (3); *núc·naráʾɛ̄ʾ* (3 pl.)

do, *náni* (1); *natáni* (2); *nánì* (3); *nǔnì* (3 pl.); — Sub. *na-ni*

dog, *cú·ŋweʾ* (abs.); *cú·nᵛóʾ* (1); *cú·nᵛáʾ* (2); *cú·nᵛǔʻ* (3); *cú·nᵛɨ̨̀* (3 pl.); — Sub. *ruva*

door, *dĭaḥǫ* (sing.); *dĭaḥɨ̨̀* (pl.); *dĭaḥɨ̀ɨ̨ʾ* (1); *dĭaḥɨ̀ɨ̨wɨ̀ʾ* (2); *dĭaḥɨ̀ɨ̨* (3); *dĭaḥɨ̨̀* (3 pl.); — Sub. *duhga* (Aragon)

dream, *mąŋgɨ́ndáʻ* (1); *matagɨ́ndáʻ* (2); *mąŋgɨ́ndàʻ* (3); *mvŋgɨ́ndǎʻ* (3 pl.)

dress, *maᵘwawáʾctínᵛúʾ* (1); *manᵛawáʾctinᵛáʾ* (2); *maywaʾáli ctìnᵛòʾ* (3); *muwáʾali ctìnᵛòʾ* (3 pl.)

drink, *nayaʾ* (1); *nayì* (2); *ná·yà* (3); *ná·ŋwálúʾ* (1 pl.); *ná·ŋwàlàʾ* (2 pl.); *nǎ·ŋwǎ* (3 pl.); *áyᵛíʾ* (imp.); — *ínyaʾ* (1 Tlo.); *nányiʾ* (2 Tlo.); *ínyà* (3 Tlo.); *náŋwà* (3 pl. Tlo.); — Sub. *na-nᵛa*

drink, *maga'* (1); *míg^{v}ị́* (2); *magạ̀* (3); *mụ́ʿwàʿ* (3 pl.)
drinker, *ná'ŋa'* (sing.); *nǔ'ŋwàʿ* (pl.)
water, fluid drops (Sp. gotear), *mú'wa'*
a drop, *nàwà*
drunk, *ḥméwa*
dry up, *nɔ̀ḥn̥dɔ́*; — Sub. *nāxnʿdi*
ear, *n̥n^{v}iá'ụ* (1); *n̥n^{v}iáwá* (2); *n̥n^{v}iá'ị̀* (3); *n̥n^{v}iá'ị̀* (3 pl.); — Sub. *n^{v}aụ*
ear of corn, *ẽ·nyɔ*
eat, *mi·^{i}ku* (1); *mi·^{i}tsu* (2); *mikwìʿ* (3); *mapɔétsɔ́'lú'* (1 pl.); *napɔétsị* (3 pl.); *àtsù* (imp.); — *niku* (1 pt.); *nitsu* (2 pt.); *nikwìʿ* (3 pt.); *nipì·ʿ* (3 pt.); *nipúlú'* (1 pl. pt.); *nipùlà'* (2 pl. pt.); — *mikwa'* (I-thee); *mítsù'* (thou-me); *mikwi'i* (he-me); *mikwà'* (he-thee); *napīʿ* (they-them); — *naku* (1 Tlo.); *natsù* (2 Tlo.); *nakù* (3 Tlo.); *nápɔ̀* (3 pl. Tlo.); — Sub. *na-su*
eater, *nákwìʿ* (sing.); *ndʿpìʿ* (pl.)
egg, *cn̥ndu* (abs.); *cn̥ndú'* (1); *cn̥ndà'* (2); *cn̥ndǔ·* (3); *cn̥ndị̀·* (3 pl.)
eight, *mɪŋgɪŋgo*
eighty, *aʿkùs·kínyo'*
embrace, *daiyárá'aʿ* (1); *dǎiyara'áʿ* (2); *dǎiyara'à* (3); *dǔiyarà'àʿ* (3 pl.); — *baiyára'áʿ* (1); *bíyára'áʿ* (2); *bǎiyára'àʿ* (3); *bǔiyara'à* (3 pl.); — *daiyará'a'* (I-thee); *daiyarú'ụ'* (thou-me); *daiyáru'ị̀'* (he-me); *daiyára'à'* (he-thee); *buiyára'à* (they-them); — *aiyaráq'* (3 Tlo.); — Sub. *ma-yada* (Aragon)
empty (Sp. vaciar), *mat·ɪʿŋgá'* (1); *matat·ɪʿŋgá'* (2); *mat·ɪʿŋgàli* (3); *mut·ɪʿŋgàli* (3 pl.)
enclose, *matsʲ́'ŋá* (1); *natatsʲ́'ŋá* (2); *nitsɔ́'ɛ̨ʿ* (3); *natsɔ́'ɛ̨ʿ* (3 pl.)
be enclosed, *kugáru'ụ'*
entangle, *maʿmbɾɔ̀'ɔ̀* (1); *matabrà'à* (2); *maʿmbɾɔ́'ɔ̀* (3); *muʿmbrá'à* (3 pl.)
enter, *mátɔ́'ɔ́* (1); *mátá'á* (2); *matɔ́'ɔ̀* (3); *mutá'ị̀ʿ* (3 pl.); — Sub. *na-toɔ*
envious, *damidù n^{v}aḥú* (1); *dúmidù n^{v}un^{v}aḥụ̀* (3 pl.)
be envious, *nakl'ɪnu'* (1); *nakl'ɪna'* (2); *nakl'ɪnà'* (3); *nukl'ɪnìʿ* (3 pl.)
envy, *nukl'ɪni*
erase (Sp. borrar), *makúdì'* (1); *matakúdì'* (2); *makúdĭ* (3); *mukúdĭ* (3 pl.); *nɪŋgudioma* (erased); — *na^{w}gudìʿ* (1 Tlo.); *nagúdì'* (2 Tlo.); *nataŋgúdì* (3 Tlo.); *nagudìʿ* (3 pl.)
escape, *makrínyǫ'* (1); *makarínya'* (2); *makarì·yà* (3); *mukɛrínyì'* (3 pl.)
every, *bámba*
exactly (Sp. exactemente, igual), *bá·nụ̀*
excrement, *'ɪmbìʿ* (abs.); *'ɪmbɪù* (1); *'ɪmbía* (2); *'ɪmbíɔ̀* (3); *'ɪmbíụ̀* (3 pl.)
extinguish, *mawí·íyu'* (1); *matats·í·yi'* (2); *mawí·iyà'* (3); *muwí·yì'*, *nutsú'iyì'* (3 pl.); *nutsú'iyí'lú'* (1 pl.); *nutsú'iyìlà'* (2 pl.); — *nadúiyu* (1 Tlo.); *nandúiyu* (2 Tlo.); *nandúiyu* (3); *nundúiyù* (3 pl.)
extract, remove (Sp. sacar), *máriʿyà'* (1); *mátriʿyà'* (2); *máreyɛ̀* (3); *nóréyɛ̀* (3 pl.)
eye, *ıdɔ̀* (sing.); *ıdɔ̨́* (pl.); *ìdù'* (1); *ìdà'* (2); *ìdɔ̌* (3); *ìdɔ̨̀* (3 pl.); — Sub. *si·tu·*
fall, *maruʿkɔ̨̀'* (1); *maraʿkɔ̨̀'* (2); *maráʿkàʿ* (3); *maraʿkálú'* (1 pl.); *maraʿkàlà* (2 pl.); *mureʿkwìʿ* (3 pl.); — *naguḥú* (1 Tlo.); *nagaḥa* (2 Tlo.); *nagaḥá* (3 Tlo.); *nagaḥị̀* (3 pl. Tlo.); — Sub. *na-gɔhɔ*
far, *tsíŋgwá*
fat, *cta·ŋga* (abs.); *cta·ŋgɪo'* (1); *ctaŋgua'* (2); *ctaŋgɪɔ̀* (3); *ctaŋgíụ̀* (3 pl.)
get fat (Sp. engordarse), *mánìmbaʿ* (1); *mátanimbaʿ* (2); *mánímbàʿ* (3); *mǔ·nímbà* (3 pl.); — Sub. *vmba*
be fat (Sp. gordo), *ɱbɔ́'* (1); *ɱbɔ́'* (2); *ɱbáwì'* (3); *ɱbá'ŋwìʿ* (3 pl.)
father, *an·u'* (1); *an·á'* (2); *an·ù* (3); *an·ụ̀* (3 pl.); — Sub. *anɔ*
favor, *ye'ŋgáhuwà*
fear (Sp. tener miedo), *nacú'ụ́'* (1); *nacú·wá'* (2); *nacúụ̀* (3); *nacúụ̀* (3 pl.)
feast, *n̥djaʾ* (abs.); *n̥djo'* (1); *n̥dja'* (2); *n̥djɔ̀* (3); *n̥djụ̀·* (3 pl.)
feel well, *migúmaḥɔ́'* (1); *mánda'úmaḥɔ́'* (2); *máŋgɪ'ímaḥɔ̀'* (3); *tugɪ́máḥɔ̀'* (3 pl.)
fight, *náramíʿna* (1); *mátramíʿna* (2); *máramɛ́ʿnɛ̀* (3); *móramɛ́ʿnɛ̀* (3 pl.)
filthy, *miḥn̥dɑeʿ*
finger, *n^{v}áụ́jacɔ'*
finish, *mánigámbɔ'* (1); *mátsigámbà'* (2); *mánigá·mbɔ̀* (3); *mǔ·nigámbɔ̨̀* (3 pl.); —

ᵍwámbɔ́ (1 pt.); *ᵍwámbà* (2 pt.); *ᵍwámbɔ̀ˈ* (3 pt.); *ᵍwámbń̥ˈ* (3 pl.); — *ninigámbɔ* (1 pt.); — *wámbora* (1 pt. Tlo.); *wámbára* (2 pt. Tlo.); *wámbu* (3 pt. Tlo.); *wámbǹ̥* (3 pl. pt. Tlo.); — Sub. *na-gvmba* (destroy)

fire, *gitsǹ̥*

fish, *ígiˀ* (abs.); *ígɪo* (1); *ígià* (2); *ígìòˀ* (3); *ígɪń̥* (3 pl.); — Sub. *ēki*

five, *wí·ts·ùˈ*; — Sub. *vi·su·*

flea, *ˈn̥nyũ*

fling, jerk, *madaˀ* (1); *matadaˀ* (2); *madɛ̀ˀ* (3); *mudɛ̃ˀ* (3 pl.); *niˀdálúˀ* (1 pl.); — *nadáˀ* (1 Tlo.)

flower, *dìˀì* (abs.); *dìˀyòˀ* (1); *díˀíyaˀ* (2); *díˀíyùˀ* (3); *díˀnyń̥ˈ* (3 pl.); — Sub. *di·i*

flower, *díˀɪc*

fly, *aḥǹ̥*; — Sub. *na·xu*

to fly, *makìcǹ̥ˀ* (1); *makìcń̥ˀ* (2); *makìcì* (3); *makìcì* (3 pl.)

foot, *nákú·* (abs.); *ná·kúˀ* (1); *ná·kwáˀ* (2); *na·kùˀ* (3); *na·kñ̥* (3 pl.); *nakṽ* (pl.); — Sub. *naxku·*

forehead, *kɛdɔ* (abs.); *ké·dɔ́ˀ* (1); *ké·daˀ* (2); *ké·dɔ̀ˈ* (3); *kí·dǹ̥* (3 pl.); — Sub. *gi·ta*

forget, *nambɔ̀m·ò* (1); *nambɔ̀m·à* (2); *nambɔ́m·ɔ̀ˈ* (3); *nambɔ́m·ń̥* (3 pl.)

four, *à·kù*; — Sub. *a·xku·*

fox, *strìgìˀ* (abs.), *strìgìɔˀ* (1); *strìgìàˀ* (2); *strígíɔ́ˀ* (3); *strígíń̥ˀ* (3 pl.)

fresh, *miŋgùwɔ*

friend (Sp. loan-word)), *míyò* (1); *míyà* (2); *mí·yù* (3); *mí·nyǹ̥* (3 pl.)

be frightened (Sp. asustarse), *mamiᵑyùˈ* (1); *mamiᵑyàˈ* (2); *mamiᵑyùˈ* (3); *mumiᵑyń̥ˈ* (3 pl.); — *nimiᵑyùˈ* (1 pt.); *nímiᵑyàˈ* (2 pt.); *nimíᵑyùˈ* (3 pt.); — *nimínyoˀ* (1 pt. Tlo.); *nimínyaˀ* (2 pt. Tlo.); *nimínyoˀ* (3 pt. Tlo.); *nimínyùˀ* (3 pl. pt. Tlo.)

frighten (tr. Sp. espantar), *manimiᵑyàˀ* (I-thee); *matsamiᵑyùˀ* (thou-me); *nánimíᵑyɛˀ* (he-me); *nánimíᵑyaˀ* (he-thee); *nú·nimíᵑyàˀ* (they-them); — Sub. *na-minᵛu·* (fear)

frog, *grábá*

froth, *n̥á·ˀa*; *naŋgáˀáˈ* (boiling liquid); — Sub. *na-gaa·* (schäumen)

be full, *gáˈnì*; — Sub. *maxni·*

fill, *mánì máˈnì* (1); *matatsa máˈnì* (2); *mánì máˈnìˀ* (3); *mún̥i máˈnɪˀ* (3 pl.)

game, *gítsǹ̥*

gather, *naŋgɛ́ˀémbɔ́ˀ* (1); *natágɛ́ˀémbɔ́ˀ* (2); *naŋgɛ́ˀémbɔ̀lɛ̀* (3); *nuŋgɛ́ˀémbɔ̀lɛ̀* (3 pl.)

gentle (Sp. soave), *wábá*

girl (Sp. moza), *nyâ·n̥* (abs.); *nyâ·* (1); *nyn̥̂·wa* (2); *nyǹ̥ǹ̥* (3); *nyn̥̂ǹ̥* (3 pl.)

girl (Sp. muchacha), *tcá·ᵘgú*

give, *nac·náˀ* (1); *narac·náˀ* (2); *nac·nɛ̀* (3); *núc·nɛ̃* (3 pl.); *nuc·nálúˀ* (1 pl.); *nuc·nàlàˀ* (2 pl.); — *níc·náˀ* (1 pt.); *nɪndác·náˀ* (2 pt.); *nɛc·nɛ́* (3 pt.); *nɛc·nɛ̃* (3 pl. pt.); *níc·nálúˀ* (1 pl. pt.); *nuc·nàlàˀ* (2 pl. pt.); — *nac·nń̥ˀ* (I-thee); *narác·nuˀ* (thou-me); *nac·nɛ̀ˀ* (he-me); *nac·nɛ* (they-him); — *nác·naˀ* (1 Tlo.); *nác·nà* (3 Tlo.); *narác·na* (2 Tlo.); *núc·nɪ* (3 pl. Tlo.); — Sub. *na-cnɔ*

go, *maˀaga* (1); *midjúˀ* (2); *maˀgɛ̀ˈ* (3); *múˀgɔ̀ˈ* (3 pl.) *níkàˀ* (1 pt.); *nítcùˀ* (2 pt.); *nì·kɛ̀* (3); *níkwálúˀ* (1 pl. pt.); *níkwàlàˀ* (2 pl. pt.); *négɔ̀ˈ* (3 pl. pt.); — *magáˈma* (I go with you); *magáˈˈmɛˀ* (I go with him); *midjáˈmn̥* (you go with me); *magáˈˈmè* (you go with him); *mágɛ̀ˈˈmu* (he goes with me); *mágɛ̀ˈˈma* (he goes with you); *mágɛ̀ˈˈmàˈ* (he goes with him); — Sub. *na-xka*

go, walk (Sp. andar), *nactáˀḥwn̥* (1); *nactaˀàˈ* (2); *náctáˀɛ̧̃ˈ* (3); *nakúˀḥwálúˀ* (1 pl.); *nakúˀḥwàlàˀ* (2 pl.); *nakúˀḥwɛ̧̃ˈ* (3 pl.); *áḥyuˀ* (imp.); — *nagrigù* (1 Tlo.); *nagrigà* (2 Tlo.); *nagrígù* (3 Tlo.); *nagrígǹ̥* (3 pl. Tlo.)

go down (Sp. bajar), *maŋgatáˀ* (1); *maratáˀ* (2); *maŋgatãˀ* (3); *muwatálúˀ* (1 pl.); *muwatàlà* (2 pl.); *muwatãˀ* (3 pl.); — *narígu* (1 Tlo.); *natrígu* (2 Tlo.); *narígù* (3 Tlo.); *nodrígù* (3 pl. Tlo.); — Sub. *na-da·u*

go out, *mà·ˈnũˀ* (1); *mà·ˈnáˀ* (2); *mà·ˈnɪ̀* (3); *mà·ˈnṽ* (3 pl.); — Sub. *na-gaxnu*

go up, ascend (Sp. subir), *marvŋwáˀ* (1); *mandrṽŋwáˀ* (2); *marvŋˈùˀ* (3); *murvŋˈùˀ* (3 pl.)

go up, climb, *nɪŋgà·mɛˈmarɛ̀*; — Sub. *na-gi·ma*

godfather (Sp. loan-word), *bálᵛo*
good, *natsṵ́·*; *gwí·tsṵ*
grain of corn, corn, *íc·uˀ* (1); *íc·àˀ* (2); *íc·ù* (3); *íc·ṵ́* (3 pl.); — Sub. *ici·*
grandmother, *cínᵛóˀ* (1); *cínᵛáˀ* (2); *cínᵛòˀ* (3); *cí·nᵛòˀ* (3 pl.); — *cíŋᵛu* (1 Tlo.); *cíŋᵛaˀ* (2 Tlo.); *cíŋᵛùˀ* (3 Tlo.); *cíŋᵛùˀ* (3 pl. Tlo.); — Sub. *na-ri·nᵛu·* (grandfather)
grandson, *hadácìnᵛoˀ*; — Sub. *da·ri·nu-ịju·*
grasp, *maᵘwatṵ́* (1); *maratṵ́*, *mandatṵ́* (2); *maᵘwátṵ́* (3); *moᵘwátṵ́* (3 pl.); — *matṵ́wiˀ* (I-thee); *naratṵ́ˀṵ́* (thou-me); *natṵ́ˀṵ́* (he-me); *natṵ́wṵ́ˀ* (he-thee); *nutṵ́wṵ́ˀ* (they-them); *naratṵ́* (1 Tlo.); *aratṵ́* (2 Tlo.); *rátṵ́* (3 Tlo.); *wátù* (3 pl. Tlo.)
grass (Sp. sacate), *dá·ca*; — Sub. *daca-lu*
grass (Sp. hierba), *cáná*; Sub. *ra·na*
sacred grass (Sp. hierba santa ?), *ná·ʿwáˀ*
grease (Sp. untar), *mastígúʿ* (1); *matastígwíʿ* (2); *mastígù·ʿ* (3); *mustígwì·ʿ* (3 pl.)
green, *mác·a;* Sub. *ma·ca·*
green wood, *rìndì·ˀ*
greet, *natásandɔ́·ˀá* (1); *natásandɔ́·ˀá* (2); *natǎ·sandɔ́ˀɔ* (3)
grind, *màʿn·ò* (1); *matàʿnò* (2); *màʿnì* (3); *mùʿnìʿ* (3 pl.); — Sub. *na··nu*
groan (Sp. quejar), *naŋgo̱wa̱* (1); *natagṵ́·wa̱* (2); *naŋgo̱wè* (3); *nvŋgo̱wè* (3 pl.)
grow, *daḥa̱ˀ*, *duḥa̱ˀ* (1); *daḥa̱ˀ* (2); *daḥàˀ* (3); *daḥìˀ* (3 pl.); — *baḥa̱* (1 fut.); — Sub. *daha*
hair (Sp. cabello), *tsṵ·ŋ·* (abs.); *tsṵŋ·ˀṵ́* (1); *tsṵŋ·wàˀ* (2); *tsṵ́·ŋ·ṵ́* (3); *tsṵ́·ŋ·ṵ́* (3 pl.); — *tsùŋ* (Tlo.); — Sub. *tasu·*
be hairy, *tsṵwíɣíˀ* (1); *tsṵwíɣnyuˀ* (2); *tsṵwíɣnyù* (3); *tsṵwíɣnyṵ̀ˀ* (3 pl.)
half, *pacíˀtà*
hand, *nya̱úˀ* (1); *nya̱wáˀ* (2); *nya̱ùˀ* (3); *nya̱ṵ́ˀ* (3 pl.); — Sub. *nᵛa·u·*
handle, soften (Sp. sobar), *macigú* (1); *matacígú* (2); *macígwìʿ* (3); *mocígwì·ʿ* (3 pl.)
hang, *mataˀáʿ* (1); *matatáˀéʿ* (2); *natáˀéˀ* (3); *mǔtáˀéˀ* (3 pl.); — *mataˀa̱ˀ* (I-thee); *matatúˀuˀ* (thou-me); *natúˀṵ́ˀ* (he-me); *natáˀa̱ˀ* (he-thee); *nutáˀṵ́ˀ* (they-them); — *naŋgràmà* (1 Tlo.)
be happy, *n·a·djùᵘ* (1); *n·a·djàˀ* (2); *n·a·djù·* (3); *n·a·djṵ́* (3 pl.); — *nadjuˀ* (1 Tlo.); *nadjáˀ* (2 Tlo.); *nadjù* (3 Tlo.); *nádjṵ́* (3 pl. Tlo.); — Sub. *na-tcɔ*
hardly, *dá·ʿkɔ̀*
have, *dɔˀ* (1); *ctadáˀ* (2); *gĕ·dɔ̀* (3); *wá·ᵃdálúˀ* (1 pl.); *wá·ᵃdàlàˀ* (2 pl.); *wá·ᵃdà* (3 pl.); — Sub. *kaɔdɔ*, *tada*
hawk, *bìyu·ˀ* (abs.); *bíʿyɔˀ* (1); *bíʿyàˀ* (2); *bíʿyɔ̀* (3); *bí·n·yò* (3 pl.)
he, *ikàʿ*; — Sub. *iʿka*
head, *ɛdɛ* (sing.); *ɛdɛ̃* (pl.); *è·djòˀ* (1); *è·djà·ˀ* (2); *é·djòʿ* (3); *é·djõ̱* (3 pl.); — Sub. *ātca*
heal, cure (Sp. sanar), *má·níˀ*, *má·níˀ lakyáˀ*
heal, cure (Sp. curar), *manitán·a* (1); *mátanitán·a* (2); *mǎnítán·à* (3); *mŭnítán·à* (3 pl.); — Sub. *na·nira·na-ịju·*
hear, *nádjṵ* (1); *natádjṵ́* (2); *nádjṵ̀* (3); *núdjṵ̀* (3 pl.); — Sub. *na-da·tcɔ*
heart, *a·ʿkɪɔ̆* (abs.); *a·ʿkíṵ́ˀ* (1); *a·ʿkíq́ˀ* (2); *a·ʿklo̱ˀ* (3); *a·ʿklṵ́ˀ* (3 pl.); — Sub. *gi·ga*
heat, *míʿka*; — Sub. *mi·xka*, *mi·ka* (warm)
to heat, *matségaˀ* (1); *matatségaˀ* (2); *matsɪgàlɛ* (3); *nutsigàlɛ* (3 pl.); — *natsegó* (1 Tlo.); *natsígò* (3 Tlo.); *natatsíga* (2 Tlo.); *natsigà* (3 pl.)
help, *mambáyáˀ* (1); *matambáyì* (2); *mambáyàˀ* (3); *mumbáyì* (3 pl.); — *nambáyu* (1 Tlo.); *natambáyi* (2 Tlo.); *nambáyu* (3 Tlo.); *mambáyíˀ* (3 pl.); — Sub. *nagani-mbaxiu·*
here, *a·kwì*; — *á·kvì* (Tlo.)
hide (intr.), *mam·bɔ́ˀɔʿ* (1); *matabɔ́ˀáʿ* (2); *nam·bɔ́ˀɔ̀ʿ* (3); *nambú·ṵ́ʿ* (3 pl.)
hide (tr.), *marakʿa̱ˀwíˀ* (I-thee); *matakʿu̱ˀṵ́ˀ* (thou-me); *makʿu̱ˀṵ́ˀ* (he-me); *makʿáˀwíˀ* (he-thee); *maraʿúˀṵ́lɛ* (they-them)
high (Sp. alto), *tsídáˀ mbáyì* (Tlo.); — Sub. *mi·si·ta*
his, *kwentɔ̀ʿ*
hit, strike, collide (Sp. golpear, chocar), *mapatúmɔ* (1); *matapatúmaʿ* (2); *mapatǔ·mà* (3); *múpatúmìʿ* (3 pl.); — *napatúmàˀ* (I-thee); *natapatúmo̱ˀ* (thou-me); *napatǔmo̱ˀ* (he-me); *napatúmɛ̀* (he-thee); *nupatúmɛ̃̀* (they-them); — Sub. *na-ga-spa·tu·*
hoarse, *naŋgáˀu̱*
hole, *í·nyáˀ* (sing.); *í·nyàˀ* (pl.); *ínyóˀ* (1);

ínyà' (2); *ínyù'* (3); *ínyɥ̀'* (3 pl.); — *í·nyá'* (Tlo.); — Sub. *di·na-lu*

make a hole, *marù·ŋ·wa'* (1); *matrù·ŋ·wa'* (2); *marù·ŋ·wɛ̀'* (3); *mǔ·ru·ŋ·wɛ̀'* (3 pl.)

honey, *ŋ·á·'* (abs.); *ŋ·ó·'* (1); *ŋ·á'* (2), *ŋ·ɔ̀* (3); *ŋ·ɥ̀'* (3 pl.); — Sub. *ǰa·ǰa*

hope, *maŋgǔ·ʷtɥ́* (1); *marátɥ́* (2); *máŋgitɥ̀ˑ* (3); *nuŋgitɥ̀ˑ* (3 pl.); — *maŋgǔ·ʷtɥ̨́* (I-thee); *maratù'* (thou-me); *maŋgétɛ̀'* (he-me); *maŋgétɛ̀'* (he-thee); *mvŋgétɥ̨̀'* (they-them); — Sub. *na-gatɔ* (wait, hope)

horn, *cɨhɨˑ* (abs.); *cɛhío'* (1); *cɛhía'* (2); *cɛhíò'* (3); *cɛhínyù'* (3 pl.); — *tcíhv* (Tlo.)

horse, *cú·kú·'* (abs.); *cúkù'* (1); *cúkà'* (2); *cúkù'* (3); *cúkɥ̀'* (3 pl.)

hot, *mi·ˑka*; — Sub. *mi·ka*

be hot, *dáyo mi·ˑka* (1); *natiyá mi·ˑka*, *natiyán·ʷu mi·ˑka* (2); *dayò mi·ˑka*, *dayón·ʷu mi·ˑka*; *dúyà mi·ˑka* (3 pl.) *bayo mi·ˑka* (1 fut.)

feel hot, *naŋgɛgɔ́n·ʷo* (1)

house, *gú·wá* (sing.); *gú·uwà* (pl.); *gɔ́'ó* (1); *gɔ́ówaˑ* (2); *gɔ́ɔ̀·* (3); *gɔ́ɥ̀·* (3 pl.); — *gú·ʷwá'* (Tlo.); — Sub. *gva*

how, *cɔ́'kɔ́'*

how much, *ɧwut·à'*; — *gwát·á'* (Tlo.)

be hungry, *nackí·djv'* (1); *nackídjá'* (2); *nackídjùˑ* (3); *nackídjɥ̀ˑ* (3 pl.); — Sub. *na-ckātcu·*

I, *íkɥ́'*; — Sub. *iku·*

if, *ts·vmàdí*, *ts·umudì·*

iguana, *á'ŋú'* (abs.); *a·'ŋyo'* (1); *a·'ŋyá'* (2); *a·'ŋyùˑ* (3); *a·'ŋyɥ̀ˑ* (3 pl.); — Sub. *d-aaŋgvmba-lu*

immediately, *kamámà'*; — Sub. *ma·xma*

inflate, *má·c·ℓ'ŋʷa'* (1); *mátac·ℓ'ŋya'* (2); *má·c·íŋyɛ̀'* (3); *muc·ℓ'ŋyɛ̀'* (3 pl.)

insert, *niˑŋgorá'a* (1); *nitáŋgorá'à* (2); *niˑŋgúra'ɛ̀* (3); *niˑŋgúra'ɛ̀* (3 pl.)

intestine, *tcá·m·bá* (abs.); *tcá·m·bɔ'* (1); *tcá·m·bá'* (2); *tcá·m·bɔ̀* (3); *tcá·m·bɥ̨̀* (3 pl.); — Sub. *scambɔ* (belly)

become irritated, angry (Sp. enfadarse), *má'skɔ'* (1); *má'skà'* (2); *má'skɔˑ* (3); *má'skɥ̀n* (3 pl.)

jar, *ŋdawa* (abs.); *ŋdao* (1); *ŋdawa'* (2); *ŋdáò'* (3); *ŋdáɥ̀'* (3 pl.)

be jealous, *naciyú'nʷu'* (1), *naciyá'nʷu'* (2); *naciyùnʷù'* (3); *nuciyùnʷù* (3 pl.)

join, *mąŋgɛ̃'mbɔ̀* (1); *matɛdɛ̃'m·bɔ̀*, *matagɛ̃'m·bɔ̀* (2); *nąŋgɛ̃mbɔ̀lɛ̀* (3); *nvŋgɛ̃'mbɔ̀lɛ̀* (3 pl.)

jug (Sp. cántaro), *daiya* (sing.); *dáiyà'* (pl.); *dáiyo* (1); *dáiyà'* (2); *dáiyò* (3); *dányɥ̀* (3 pl.); — *ráiya* (Tlo.); — Sub. *da·ǰa*

jump, *matsíga'* (1); *matatsígá'* (2); *matsígɛ̀'* (3); *mutsígɛ̀'* (3 pl.); — *nakícɥ̀'* (1 Tlo.); *nakicì'* (2 Tlo.); *nakicɥ́'* (3 Tlo.); *nakicɥ̀'* (3 pl.); — Sub. *ma·siga* (Squier)

kick, *ma·ˑŋgúpráˑa*, *naˑŋgobráˑa*, *naraˑŋgobráˑa* (1); *matá·ˑŋguprá'a* (2); *ma·ˑŋguprá'ɛ̀ˑ* (3); *nɨˑŋgupra'ɛ̀ˑ* (3 pl.); — *ma·ˑŋguprá'ɥ́ˑ* (I-thee); *mataˑŋguprɔ'ɥ̨* (thou-me); *maˑŋguprɔ'ɥ̨* (he-me); *maˑŋguprɔ'ɥ́ˑ* (he-thee)

kill, *maciyàˑ* (1); *mataciyàˑ* (2); *mací·yàˑ* (3); *mucí·yà*, *nundátì* (3 pl.); — *macɥ́nyú'* (I-thee); *matacɥ́nyo'* (thou-me); *macɥ́nyò'* (he-me); *macɥ́nyà'* (he-thee); *nundadímiˑnɛ* (they-them); *maŋgúdɥ̨* (I-them); *marádɥ́* (you-them); *maŋgúdɥ̨* (he-them); — Sub. *d-eri·a*

kiss, *mikútcɨtù'* (1); *mitsútcɨtù'* (2); *mikwítcɨtù'* (3); *mupvlótcɨtúlú'* (1 pl.); *mupvlá·tcɨtùlà'* (2 pl.); *mupítcɨtù'* (3 pl.)

knee, *grùmiyo* (abs.); *grùmiyo'* (1); *grùmiya'* (2); *grùmiyɔ̀* (3); *grùmiyɥ̀* (3 pl.); — Sub. *tu·gomi·u*

knock down, *matigù* (1); *matatigù* (2); *natigwì* (3); *natigwɨ̀* (3 pl.)

know (Sp. saber), *dáˑyo* (1); *natíyaˑ* (2); *ndá·iyɔ̀* (3); *ndúyàˑ* (3 pl.)

know (Sp. conocer), *naní'nɥ̨'* (1); *natatsí·nɥ̨'* (2); *naní'nɥ̨'* (3); *nuní'nɥ̨'* (3 pl.); — *naninɥ́wɥ̨'* (I-thee); *natsinɥ̀ɥ̨'* (thou-me); *naninɥ̀ɥ̨'* (he-me); *naninɥwɥ̨'* (he-thee); *nuninɥwɨ'* (they-them); — *naninɥ́'* (1 Tlo.); *naninɥ̀'* (2 Tlo.); *natatsínɥ̨'* (3 Tlo.); *nɔtsìnì* (3 pl. Tlo.); — Sub. *daininu* (Squier)

land, earth, *ŋ̀bàˑ*, *nù·mbà*; — Sub. *u·mba*

be lame, *micŋgá ná·kú'* (1); *micŋgáná·kwá'* (2); *micŋgàna·kù'* (3)

large, *ŋ̀bàˑ*

large (Sp. grande), *waɧ́'* (1); *waɧ̨'* (2); *waɧà* (3); *waní'* (3 pl.); — Sub. *dagu*

late, *wa·kí·*'; — Sub. *na-ni-gvaxi·* (säumen)
laugh, *nandŭ·uwa*ˀ (1); *natadŭ·uwa*ˀ (2); *nandŭ·u*ˀ*wɛ̃*ˀ (3); *nvndŭ·u*ˀ*wɛ̃*ˀ (3 pl.); — Sub. *na-ndi-ɛ̃gu·*
be lazy, lax, *és·ga*' (abs.); *nás·gɔ*' (1); *nás·gá*' (2); *nás·gɔ̀* (3); *nás·gɥ̀* (3 pl.)
leaf, *ín·á* (sing.); *ín·à*ˀ (pl.); *ín·ʊ́*' (1); *ín·a* (2); *ín·ʊ̀* (3); *ín·ɥ́* (3 pl.); — Sub. *i·na*
leave (Sp. dejar), *nání*'*ŋʷɔ́*' (1); *nátatsí*'*ŋʷá*', *natsí*'*ŋʷá*' (2); *nání*'*ŋɔ̀*' (3); *mŭní*'*ŋʷálú*' (1 pl.); *mŭní*'*ŋʷàlà*' (2 pl.); *mŭní*'*ŋà*' (3 pl.); — *ní ní*'*ŋʷɔ́*' (1 pt.); — *wámbɔ ní ní*'*ŋɔ̀*' (somebody leaves); — *mání*'*ŋʷɔ́*' (I-him); *mání*'*ŋʷɥ́*' (I-thee); *mátatsí*'*ŋʷɥ́*' (thou-me); *nɛnɛ́*'*ŋʷɛ́*' (he-me); *nɛní*'*ŋʷɛ́*' (he-thee); *mŭní*'*ŋʷɛ̀*' (they-me); *mŭní*'*ŋʷá*·' (they-you); *nŭní*'*ŋʷà*' (they-him); — *ná·ní*'*ŋʷu* (1 Tlo.); *nátatsí*'*ŋya* (2 Tlo.); *na·nì*'*ŋʷù* (3 Tlo.); *nŭní*'*ŋʷà* (3 pl. Tlo.)
leave, take away (Sp. quitar), *mací*'*íŋgá*' (1); *matací*'*íŋgá*' (2); *mací*'*íŋgà*' (3); *mucí*'*íŋgɛ̃*ˀ (3 pl.)
lend, *matɛ́*'*nʷɔ́* (1); *matatɛ́*'*nʷá* (2); *matɛ́*·'*nʷɔ̀* (3); *notɛ́·nʷà* (3 pl.)
lick, *ma·ctɔ̀*' (1); *naractɔ̀*' (2); *ma·ctɔ̀* (3); *nuctí*' (3 pl.)
lie down (intr.), *mabɔ̀*' (1); *matábá*' (2); *mábɔ̀*' (3); *múbù*' (3 pl.); — *nɛ·bɔ*' (1 pt.); *nitábá*' (2 pt.); *nɛbɔ̀*' (3 pt.); *nɛ·bálú*' (1 pl. pt.); *nɛbàlà*' (2 pl. pt.); *nibɥ̀*' (3 pl. pt.); — *mabɔ̀* (1 Tlo.); *tabà* (2 Tlo.); *ébò* (3 Tlo.); *íbɥ̀* (3 pl. Tlo.); — Sub. *gapɔ*
lie down, go to bed, *mastí·gá* (1); *matastí·ga* (2); *mastí·gà* (3); *mustí·gà*
lift, carry (Sp. llevar), *magakáiyo* (1); *mídjo*'*tcà*' (2); *magɛ́·kayɔ̀*' (3); *mogokɔ̀nyŭ*' (3 pl.); — *magakánya*' (I-thee); *mídjutcɥ́*' (thou-me); *magɛkanyù*' (he-me); *magɛkanyà*' (he-thee); *mogokunyɥ̀*' (they-them); *magakagwɥ́*' (I-them); *midjustɥ̀* (you-them); *magɛkagwɥ́*' (he-them); *mogokudɥ́lú*' (we-them); *mugwalokagwàlà* (we-you (pl.); *mugúkunyù*' (they-me); *mugúkunyà* (they-you)
lift oneself, get up (Sp. levantarse), *magucɥ́*' (1); *maracɥ́*' (2); *maŋgícì* (3); *mu*^{g}*wácɥ̀* (3 pl.); *mu*^{g}*wácúlú*' (1 pl.); — Sub. *no-da·cɔ*
lift (Sp. levantar), *nakúc·i* (1); *natakúc·i* (2); *nakúcì* (3); *mukúcìlɛ* (3 pl.); — *makucɥ́*' (I-thee); *matakucɥ́*' (thou-me); *makucɥ́*' (he-me); *makucɥ́lɛ* (he-thee); *nukucɥ̀lɛ* (they-them); — *nakú·ci* (1 Tlo.); *ntakúci* (2 Tlo.); *nakucì* (3 Tlo.); *nakúcɥ̀* (3 pl. Tlo.)
light (Sp. lumbre), *a·gù*·' (abs.); *á·gú*' (1); *ágwá*' (2); *ágù*' (3); *ágɥ̀*' (3 pl.); — Sub. *a·gu·* (fire)
to light, burn, *mambí*'*í* (1); *matsambí*'*í*, *matabí*'*í* (2); *mambí*'*ì*ˀ (3); *mumbi*'*ì*ˀ (3 pl.); *mambì*'*ì* (it is light); — *nambí*'*iqú* (1 Tlo.); *nambí*'*iyá* (2 Tlo.); *nambí*'*iyù* (3); *numbí*'*iyɥ* (3 Tlo.); — Sub. *rvmbu·* (braten)
light up (Sp. encender), *nakatíyù*' (3)
lightning (Sp. rayo), *a·*'*kɥ̀*
to like, *nanígu*' (1); *nánugwá*' (2); *nánugɥ̀*' (3); *nunugɥ̀*' (3 pl.); — Sub. *na-ni·ka*
lime, *idɥ́* (abs.); *ìdìɔ̀*' (1); *ìdìà*' (2); *ídìɔ̀*' (3); *ídìɥ̀*' (3 pl.); — *ídí*' (Tlo.)
lion, *ɪndimàŋa*'
lip, *ctaràɥ́*'
little (Sp. poco), *mà*'*tsù*
live, *daya* (1); *tiya* (2); *dá·yɛ̀*' (3); *dó·yɛ̀*' (3 pl.); — Sub. *na-ta·u* (sit, dwell)
liver, *cgégɔ́*; — Sub. *gi·kɔ*
lizard, *tcihìndù* (abs.); *tcihíndìù*' (1); *tcihɪndìa*' (2); *tcihɪndíù* (3); *tcihɪndíɥ̀* (3 pl.); — Sub. *si·du*
load, burden (Sp. cargar), *mac·né·*'*da*' (1); *matac·né·*'*dà*' (2); *nac·né·*'*dɛ̀* (3); *muc·né·*'*dɛ̃* (3 pl.)
load, burden (Sp. cargar), *káya* (1); *ctátca*' (2); *ctáyo*ˀ (3); *ctakúnyɥ̀·* (3 pl.); — *magakáya* (1 fut.); *midjútca*' (2 fut.); *magɛká·yà*ˀ (3 fut.); *magɔkúyàˀ* (3 pl. fut.); — *nàgù* (1 Tlo.); *naráda* (2 Tlo.); *nágù* (3 Tlo.); *núdà* (3 pl. Tlo.)
a load, *kàyàˀ*
a load, *kàgùˀ*
look, *namindù*'*mɪna* (1); *natamindí*' (2); *namíndù* (3); *numindì*' (3 pl.)
look for, *ndí·*'*íyá*', *ndá*'*yá*' (1); *ntí*'*íyá*', *natí*'*íyá*' (2); *ndí*'*íyà*', *ndá*'*yɛ̀*' (3); *ndí*'*íyɛ̀*', *ndú*'*yɛ̃*' (3 pl.); *ndí*'*íyálú*', *nduyálú*' (1 pl.); *nduyàlà*' (2 pl.); *báiya*' (1 fut.); — *dányálá*' (I-thee); *natí*'*nyú*' (thou-me); *da*'*nyùɛlɛ̀*

(he-me); *da'nyàelè* (he-thee); *du'yàlè* (they-them); — *ndá'ya'* (1 Tlo.); *ndá'yá'* (2 Tlo.); *nqndá'yà'* (3 Tlo.); *ɳdúyà'* (3 pl. Tlo.); — Sub. *daya* (Squier)

lose, *ninipátiga* (1 pt.); *nitsapátiga* (2 pt.); *ninipátigè* (3); *nindátigà* (he is lost)

louse, *yáḥà'* (abs.); *yáḥyò'* (1); *yáḥyá'* (2); *yáḥyɔ̀'* (3); *yáḥnᵛù'* (3 pl.); — Sub. *ia·xa*

love, *nandokáyó* (1); *nandactíyàˈ* (2); *nandokáˈiyò* (3); *nandɻ́kayà* (3 pl.); *nandalúkúya* (1 pl.); *nandalákúyà* (2 pl.); — *nandokáyá'* (I-thee); *nandactéyú'* (thou-me); *nandokáye'* (he-me); *nandoká·ya'* (he-thee); *nundɻ́kú·yàˈ* (they-them); — *nanakvɻ̀* (1 Tlo.); *nanákvɻ́* (2 Tlo.); *nanákíɻ̀* (3 Tlo.); *nanákwɻ́* (3 pl. Tlo.); — Sub. *nangasguayu* (Aragon)

lower, *narígwɻ́'* (I-thee); *natrígɻ́'* (thou-me); *narigɻ̀·lè* (he-me); *narigwɻ̀lè* (he-thee); *nurigwɻ̀lè* (they-them); — *narígu* (1 Tlo.); *narígù* (2 Tlo.); *narígù* (3 Tlo.); *nodrígù* (3 pl. Tlo.); — Sub. *na-gii*

lungs, *itsidò*

maguey, *yu·ˈwàˈ* (abs.); *yɔ̀ˈɔ̀'* (1); *yɔ̀ˈwà'* (2); *yɔ̀ɔ̀ˈ* (3); *yɔɻ̀ˈ* (3 pl.)

man, *cabɔ̀* (sing.); *cabɔ̀* (pl.); — Sub. *ra·bu*

marry, *manígɻ̀'* (1); *matatsígɻ̀'* (2); *nanígɻ̀'* (3); *mŭnígwɻ̀* (3 pl.); *mŭnígúlú'* (1 pl.); — *mac·natsgɻ́wɻ̀'* (I-thee); *maracnatsgɻ́'ɻ̀'* (thou-me); *mac·natsgɻ́'ɻ̀'* (he-me); *mac·natsgɻ́'wɻ̀'* (he-thee); *nuc·natsgɻ́'wɻ̀'* (they-them); — *manígɻ́'* (1 Tlo.); *natatsígɻ́* (2 Tlo.); *nanígɻ̀'* (3 Tlo.); — Sub. *na-gani·-ku·*

meal, broth, *yádɻ́*

measure, *maraŋgɻ́·wá* (1); *matagɻ́wa*, *maratagɻ́wá* (2); *maŋgɻ́wè*, *maraŋgɻ́wè* (3); *múraŋgɻ́wè* (3 pl.)

meat, flesh, *cúwíˈⁱ* (abs.); *cúyú'* (1); *cúyá'* (2); *cúyù'* (3); *cúnyɻ̀'* (3 pl.); — *cúwí'* (Tlo.)

meet, *marà'nɔ* (1); *matrá·niˈ* (2); *nirà'nɻ̀* (3); *murà'nèˈménɛ̀* (3 pl.); — *nickámá* (1 Tlo.); *nitáskáma* (2 Tlo.); *nickámà* (3 Tlo.); *nickámă* (3 pl.)

melon, (Sp. loan-word?) *bɔlɔn·eˈ* (abs.); *bɔlónuo'* (1); *bɔlónía'* (2); *bɔlóníò'* (3); *bɔlóníɻ̀'* (3 pl.)

mine, *kwéntɔ*

miss, *nánda tɛgɔcí·á* (1); *nánda tɛgá·cíá* (2); *nénda tɛgɔcí·á* (3); *nénda tígɻ̀cí·á* (3 pl.)

mix, *maŋgɛ́·ŋgɔ* (1); *matagɛ́·ŋga* (2); *maŋgɛ́·ŋgɔˈ* (3); *muŋgɛ́·ŋgàˈ* (3 pl.)

money, *bú·ˈká'*

mosquito, *ˈnᵛíɻ́ɦɻ́*

mother, *rú'ᵘdú* (1); *rú'ᵘdá* (2); *rú'ᵘdù* (3); *rú'ᵘdɻ̀* (3 pl.); — Sub. *du·tu·*

mountain, *a'ɻ́·wa* (sing.); *a'ɻ́wà* (pl.); — *kùbà* (Tlo.); — Sub. *ayva*

mouth, *ràɻ̀'* (1); *ràwɻ̀'* (2); *ráɻ̀* (3); *ráɻ̀* (3 pl.); — *ràɻ̀* (1 Tlo.); *ràwɻ̀'* (2 Tlo.); *ráɻ̀* (3 Tlo.); *raɻ̀* (3 pl. Tlo.); — Sub. *da·u·*

move, *nabɻ́* (1); *natabɻ́* (2); *nábɻ̀* (3); *núbɻ̀* (3 pl.); *nibálú'* (1 pl.); *nubálú'* (2 pl.); — *naba'ɻ́'* (I-thee); *natabá'ɻ́'* (thou-me); *naba'ɻ̀'* (he-me); *naba'ɻ̀'* (he-thee); *nuba'ɻ̀'* (they-them); *nabámíná'* (I-myself); *natabámíná'* (you-yourself); *nabámeˈnè'* (he-himself); — *nabáŋga* (many objects move)

move, stir (Sp. menear), *nabaníní'* (1); *natabaníní'* (2); *nabaníni'* (3); *nobaníni'*, *nobaníníméˈnè* (3 pl.); *nobaníníló'* (1 pl.); *nibaníníló'* (2 pl. pt.); *nobaníníla'* (2 pl.); *nibaníníla'* (2 pl. pt.)

move with side, *nabanɨ́·ˈŋᵛɔ́'* (1); *natabanɨ́·ˈŋᵛá'* (2); *nabanɨ́·ˈŋᵛù'* (3); *nubanɨ́·ˈŋᵛù'* (3 pl.)

move with head, *nabɻ̀-ìdjɔ̀'* (1); *natabɻ̀-ìdjà'* (2); *nabɻ̀-ídjɔ̀'* (3); *nubɻ́-ìdjɔ̀* (3 pl.)

move with hand, *nabányɻ́u'* (1); *natabányɻ́wá'* (2); *nabányɻ́ù'* (3); *nubɻ́nyɻ́ɻ̀* (3 pl.); *nibɻ́nyáɻ́* (1 pt.)

move with foot, *nabán·ákú* (1); *natabán·á·kwá'* (2); *nabán·a·kù'* (3); *nubán·a·kɻ̀* (3 pl.)

move around, *maˈmąŋganᵛí'* (I-thee); *natsaˈmąŋganᵛɔ̀'* (thou-me); *maˈmąŋganᵛɔ̀'* (he-me); *maˈmąŋganɻ̀ð* (he-thee); *naˈmąŋgáyimɛ́ˈnè* (they-them)

much, *báá'*; — Sub. *baa* (enough)

mucus, *s·kí·n·ya'* (abs.); *s·kí·n·yɔ'* (1); *s·kí·n·yà'* (2); *s·kí·n·yɻ̀* (3); *s·kí·nyɻ́* (3 pl.)

muscle, *itsùˈ wáˈwa'*

nail, *cagàn·yǫ* (abs.); *cagányó'* (1); *cagányá'* (2); *cagányɔ̀'* (3); *cagányɻ̀'* (3 pl.); — Sub. *cnᵛa-nᵛo*

to nail, *matsśá'* (1); *matatsśá'* (2); *matsś·ę̀·ᶜ* (3); *mutsśa'ę̀·ᶜ* (3 pl.)
be naked, *bacɔ̀'* (1); *bacà'* (2); *bácɔ* (3); *bácɣ̨* (3 pl.)
nanche (unidentified fruit), *agacán·a*
narrow, *tcà·pà*; — Sub. *tcopa* (chato)
narrow, *gú'vcu*
navel, *dvmiɔ̀'*; — Sub. *du·mi·u·*
near, *miḥiŋgi'ᶜ*; — *wiḥmbì* (Tlo.); — Sub. *i·ŋgi·*
be necessary, *'ŋdáyó'* (1); *'ŋdáyá'* (2); *'ŋdáyɔ̀'* (3); *'ŋdányɣ̨'* (3 pl.)
neck, *ápùᶜ* (sing.); *àpù* (pl.); *à·pù'ᵘ* (1) *à·pà'* (2); *à·pùᶜ* (3); *à·pɣ̨·* (3 pl.); — *àpù* (Tlo.); — Sub. *ha·pu·*
nephew, *darìcıù*
net, *ctági·cmì*
new, *nvc·ı'*; — Sub. *nu·ci*
night, *kí·n·a*
nine, *mĭḥınagú·wà*; — Sub. *mænu·*
no, *rákà'*
no (in composition), *tsí*; *tsíyú'* (I do not wish); *ŋtsígú·ḥwa* (I do not sell); *ŋtsíciyà* (I do not kill)
noise, *náwą̀*, *nąwányu'*
noise (hollow sound), *nagɔ̀·*
nose, *rákɔ́'* (sing.); *rá·kɣ̨·* (pl.); *ráká'*, *ctráká* (1); *rákáʼ* (2); *rákɔ̀'* (3); *rákɣ̨* (pl.); — Sub. *da·kɔ*
nothing, *ndàᶜ*
now, *cugì'*; — *cúgı'* (Tlo.)
obey, *nadjáwá* (1); *natadjáǫ́* (2); *nadjá·ɣ̨* (3); *nodjá·ɣ̨·* (3 pl.)
old, *á'mbà*; — Sub. *a·xmba*
be old, *á'mba manyaḥɣ̨'* (1); *á'mba manyaḥɣ̨wá'* (2); *á'mba manyáḥɣ̨'* (3)
old man, *cabaḥà*
on top of, *ínú*
one, *ŋ́bɔ̀*, *tímbá'*
only, *hawí*
open, *mamátó* (1); *natamátá* (2); *mamátɔ̀* (3); *mumátàᶜ* (3 pl.); *mumátálú'* (1 pl.); *mumátàlà'* (2 pl.); *nimátó* (1 pt.); — *magámatɔ́* (1 fut.); *midjutámatá* (2 fut.); — *díaḥǫ́ mátàᶜ* (the door is open); — *natà* (1 Tlo.); *ratà* (2 Tlo.); *ítɣ̨* (3); — Sub. *nadarma·ta*

open, *nįbrátù* (1 pt.); *nįbrátà* (2 pt.); *nįbrátù* (3 pt.)
orange, *làc·à* (abs.); *lac·ɔ'* (1); *lac·à'* (2); *lac·ɔ́ᶜ* (3); *lac·ɣ̨ᶜ* (3 pl.); — Sub. *la·ca*
order, *matá·ŋgo* (1); *maratà·ŋgo* (2); *natá·ŋgɔ̀* (3); *notá·ŋgɔ̀* (3 pl.)
order, *matsąᶜwi'* (I-thee)
order, *mac·niyaḥǫ́'* (1); *matác·nᵛaḥǫ́'* (2); *mắ·cniyaḥɣ̨'* (3); *mŭc·niyahɣ̨* (3 pl.); — *mac·nᵛáḥuwà* (I-thee); *natac·nᵛáḥɣ̨'* (thoume); *mac·nᵛaḥɣwè* (he-me); *macnᵛaḥɣwà* (he-thee); *muc·nᵛaḥɣ̨* (they-them); — *nac·nᵛáhɣ̨'* (I-them); *natc·nᵛahwɣ̨* (thouthem); *nac·nᵛáhɣ̨'* (he-them)
our, *kwéntálú'*
overturn, revolve (Sp. voltear), *matà·ŋgàᶜ* (1); *matatà·ŋgàᶜ* (2); *matá·ŋgàᶜ* (3); *mutá·ŋgàᶜ* (3 pl.)
owe, ought, *gú'ᵘdá* (1); *ctá'ᵘdá* (2); *gę́'ᵉdè* (3); *ᵘwá'ᵘdè* (3 pl.)
owner, *kwé·ntɔ́'* (1); *kwé·ntá'* (2); *kwé·ntɔ̀'* (3)
ox, *cɛdɛᶜ* (abs.); *cɛdıù'* (1); *cɛdìà'* (2); *cɛdıɔ* (3); *cɛdìɣ̨* (3 pl.); — *cédí* (Tlo.)
pain, *gíná'*; — Sub. *na·u* (cf. to pain)
to pain, *naŋgáǫ́'* (1); *naŋgáwǫ́'* (2); *naŋgá'ɣ̨'* (3); *naŋgá'ɣ̨'* (3 pl.); — *nąyá'u'* (1 Tlo.); *nąyá'wa'* (2 Tlo.); *nąya'ɣ̨'* (3 Tlo.); *nąya'ɣ̨'* (3 pl. Tlo.)
palm (tree), (*ìcì*)*kó·kó* (abs.); *kó·kıo'* (1); *kó·kıá'* (2); *kó·kıɔ̀'* (3); *kó·kıɣ̨'* (3 pl.)
a pant, *kɣwé'wa*
pass, walk, *manɔ̀'ḥɔŋgɔ́'* (1); *manɔ̀'ḥɔŋgá·'* (2); *manɔ̀'ḥɔŋgɔ̀'* (3); *manù'ḥvŋgɣ̨* (3 pl.)
patio, *é·cá'*
pay, *mánınúmá'* (1); *mátsınúmá'* (2); *mánınúmàlè* (3); *mùnınúmà·lè* (3 pl.)
penis, *cŋ́du* (abs.); *cŋ́du'* (1); *cŋ́dà'* (2); *cŋ́dù'* (3); *cŋ́dɣ̨ᶜ* (3 pl.); — Sub. *sæxnᵛu*
pinch (Sp. repiscar), *mamígá'lɛ* (1); *matamígá'* (2); *mámigɛ̀'* (3); *múmigɛ̀'* (3 pl.)
pinch (Sp. pellizcar), *matcítú'ᶜ* (1); *matatcí·tu'ᶜ* (2); *matcítìᶜ* (3); *mutcí·tìᶜ* (3 pl.)
pitahaya, *drúbu* (abs.); *drúbuú'* (1); *drúbıá'* (2); *drúbıùᶜ* (3); *drúbıɣ̨* (3 pl.)
pitcher (Sp. olla), *iḥwì* (abs.); *ḥwiyɔ'* (1); *ḥwiyà'* (2); *ḥwíyù* (3); *ḥwínyù* (3 pl.)
pity, *naŋgǫ́'ǫ́'* (1); *naŋgǫ́'wa* (2); *naŋgá'ɣ̨'*

(3); *nvŋgá'ỳ'* (3 pl.); *nɪŋgą́'ùma* (1 pt. refl.); *nɪŋgą́'wàma* (2 pt. reflex.); *nɪŋgá'ỳ'ma* (3 pt. reflex.); *nɪŋgą́'ą̀ma* (3 pl. pt. reflex.)

place (Sp. poner), *má·gi'* (1); *mátági'* (2); *má·gì·'* (3); *nú·gì'*, *mó·gì'* (3 pl.)

play, *mats·ɨ́* (1); *maráts·ɨ* (2); *nats·ɨ́* (3); *nuts·ɨ̀* (3 pl.); — Sub. *na-sigi·si·*

plump, *midȯ*

pour, leak (Sp. derramar), *mac·ndrígu* (1); *matac·ndrígu* (2); *mac·ndrígwi'* (3); *muc·ndrígwi'* (3 pl.)

pretend, *ninikwé·nt·à* (1); *natanikwé·nt·à* (2); *ninikwé·ntè'* (3)

prick, wound (Sp. pinchar), *macúmǫ* (1); *matacúmà* (2); *macúmỳ* (3); *macúmà* (3 pl.)

prick (Sp. picar), *matsú'tù'* (1); *matatsú'tù'* (2); *matsú'tɨ̀·'* (3); *mutsú'tɨ̀·'* (3 pl.); — *natsú'tɨ́ŋ'* (1 reflex.); *natatsú'timína'* (2 reflex.); *natsú'timé'nè* (3 reflex.)

priest, *djakỳ*

pueblo, *cváhí'* (abs.); *cvá'ɳnyu* (1); *cvá'ɳnyâ* (2); *cvá'ùnyù* (3); *cvá'ɳnyỳ'* (3 pl.)

pull by rope (Sp. halar), *macú·mu* (1); *matacú·ma* (2); *macú·mù* (3); *macú·mà* (3 pl.)

pull out, *mádà* (1); *matádà* (2); *mádè'* (3); *nodálú'* (1 pl.); *nádà'minálú'* (1 pl. rec.); *nódù'minàlà* (2 pl. rec.); *nódɛ̀'* (3 pl.)

pull up (Sp. arrancar), *marubù* (1); *matarubù* (2); *marubì'* (3); *murubì'* (3 pl.); — *mats·rubù* (1); *matats·rubù* (2)

push, *macgv̋'vŋgà'*, *macúŋga* (1); *matacgv̋'vŋgá'* (2); *nacgv̋'vŋgè'* (3); *nucgv̋'vŋgè'* (3 pl.); — *nicgv̋'vŋgà'* (1 pt.); — *nackv̋'vŋgą́'* (I-thee); *natackv̋'ɣŋgỳ'* (thou-me); *nackv̋'ɣŋgú'* (he-me); *nackv̋'ɣŋgą́'* (he-thee); *mackv̋'vŋgí'* (I-them); *matackv̋'vŋgĩ'* (you-them); *nackv̋'vŋgɨ́* (he-them); *muckv̋'vŋgɨ́lù* (we them); *muckv̋'vŋgɨ́* (they-them)

push, *narúḥnwa*, *namàḥwa* (1); *natrúḥnwa*, *natráḥnwa* (2); *naráḥŋgwe* (3); *naráḥŋgwà* (3 pl.)

put, place (Sp. meter), *macúdà*, *mackúdà'* (1); *matacúdà'* (2); *macúdà'*, *mackúdà'* (3); *muckúdà'*, *mucúdà'* (3 pl.)

put, place (Sp. meter), *matɔ̋'ɔ* (1); *matá'á* (2); *matɔ'ɔ̀* (3); *matu'ɣ̀* (3 pl.)

quarrel, grumble, *mandjá'ma'* (1); *natadjá'ma* (2); *nandjá'ma'* (3); *nundjá'ma'mɛ'nɛ* (3pl.)

to rain, *nanɪdu·wà'*; — Sub. *d-vndɪ·-lu*

rain, *ndu·wà'*; — Sub. *d-vndɪ·-lu*

reach (Sp. lograr), *muhvŋgàȯ* (1); *nuhvŋgawà* (2); *muhvŋgáȯ'* (3); *nihɪŋgáỳ'* (3 pl.)

reach (Sp. alcanzar), *na·ckàmà* (1); *na·tackamà* (2); *na·ckámà* (3); *nu·ckámà·* (3 pl.); — *nackàmą'* (I-thee); *natackamą'* (thou-me); *nackamỳ'* (he-me); *nackamą̀* (he-thee); *nuckamɨ̀* (they-them); — Sub. *ni-ckamo*

receive, *bayarígú'* (1); *biyarígú'* (2); *bayarígwi'* (3); *boyarígwɨ'* (3 pl.)

recollect (Sp. acordarse bien), *nakómɔ́'* (1); *nakómá'* (2); *nakɔmɔ̀* (3); *nakúmɔ̃'* (3 pl.); *nakómalú'* (1 pl.); *nakɔmàlà* (3 pl.); *nikómɔ'* (1 pt.); — *nakɔmɔká'ya'* (I-thee); *nakɔmactí'ya'* (thou-me); *nakɔmoká·yɛ'* (he-me); *nakɔmoká·'yà'* (he-thee); *nakɔmǫkó·'yà'* (they-you); *nakɔmǫkó·yɛ̀'* (they-me); — Sub. *dogi-goema-lo* (Aragon)

red, *máŋá'*; — Sub. *maŋga*

reed (Sp. bejuco), *á'mà*

reed-grass (Sp. carrizo), *idv'*; — *ɛ'ɛ'* (Tlo.)

reed-grass (Sp. carrizo), *cì'ɻ* (abs.); *cí'ɻ́nyù* (1); *cí'ɻ́nya'* (2); *cí'ɻ́nyù* (3); *cí'ɻ́nyỳ* (3 pl.)

remain, *má'wánú'* (1); *má'wáná'* (2); *má'wanù'* (3); *mo'wanɥ̀* (3 pl.)

rest, *mandanǎ·kɔ'* (1); *mandanǎ·ka'* (2); *mandanǎ·kɔ̀* (3); *mandanǎ·kɥ̀* (3 pl.); — Sub. *na-na·ndɔ*

return, *nataŋgɥ́'* (1); *nataŋgá·lɛ* (2); *nataŋgà·lɛ̀* (3); *mutaŋgà·lɛ̀* (3 pl.)

rib, *cɔ̀ctɔ̀'*

ripe, *nɛ'gɔ'*; — Sub. *nægo*

ripen, *na·gɔ'*

river, *mànyu*

roll, *mambící'* (1); *matabící'* (2); *mambí·cì'* (3); *mvmbí·cì'* (3 pl.)

roof, *dɛ'mà*

roof, *áḥmù*

rope, *ɳnᵛù* (abs.); *ɳnᵛù* (1); *ɳnᵛùwà* (2); *ɳnᵛṹ'ỳ* (3); *ɳnᵛṹ'ỹ* (3 pl.); — Sub. *du·nᵛu·*

rotten, *ní'igà'*

row, *mága·ká·nu* (1); *mídjuká·nu* (2); *magéka·nu* (3); *mogóká·nu* (3 pl.)

rub (Sp. fregar, molestar, raspar), *mácama'mų̀* (1); *mátacamá'ma* (2); *macamá'mų̀* (3); *mucamá'mà* (3 pl.); — *manᵛą́wį́'* (I-thee); *matanᵛą́wį́'* (thou-me); *manᵛqwį́'* (he-me); *manᵛqwɨ́'* (he-thee); *munᵛqwį́'* (they-them)

rub, stroke (Sp. frotar), *mac·míndɔ* (1); *natac·míndɔ* (2); *mac·míndì* (3); *muc·míndɨ'* (3 pl.)

run, *maygáyú'* (1); *matagáyá'* (2); *maygáyù* (3); *muygwànyù* (3 pl.); *nvygwàyálú'* (1 pl.); *nvygwàyàlà'* (2 pl.); *nıygáyú'* (1 pt.); *átagáyà'* (imp.); — *nagayú'* (1); *natagáyá'* (2); *nagayù* (3); *nagányù* (3 pl.); — Sub. *na-ga·gvı*

sacred, *mìtsákɨ́*

sad, *nıygì·na'*

be sad, *naygì·nɔ̀'* (1); *ctá'ų naygì·nà'* (2); *naygì·nà'* (3); *tıginvygì·nì'* (3 pl.)

saliva, *yá'ndɔ̀'*; — Sub. *yanjdo* (Aragon)

salt, *ídù* (abs.); *ídıù'* (1); *ídà'* (2); *í·dù'* (3); *í·dį̀'* (3 pl.); — Sub. *i·du·*

same, *má'*, *mári*

sandal, *tcada'* (abs.); *tcadɔ'* (1); *tcadà'* (2); *tcádɔ̀'* (3); *tcádį̀'* (3 pl.)

scatter, *macındrígalɔ'* (1); *matacındríga* (2); *macındrígɛ'* (3); *mucındrí·gɛ̀'* (3 pl.)

scrape, graze (Sp. rozar), *nayagʊ́'* (1); *natáyagwá'* (2); *nayagʊ̀'* (3); *núyagʊ̀'* (3 pl.)

scrape (Sp. raspar, rascar), *má·tɔ́* (1); *má·ndátá* (2); *má·tɔ̀* (3); *mó·tà'* (3 pl.); — Sub. *na-xtɔ* (raspeln)

scratch, *manᵛqwɨ́'* (1); *natánᵛqwɨ́'* (2); *maᵛnáwɨ̀* (3); *munᵛqwį́'* (3 pl.); — *nanᵛqwí'* (I-thee); *natanᵛą́'ų́'* (thou-me); *nanᵛą́'ỳ'* (he-me); *nanᵛą́wɨ̀'* (he-thee); *nunᵛqwì'* (they-them); — *natcítų* (1 Tlo.)

scurf, *ctrú·wá*

sea, *míkú*; — Sub. *da·gu·i·ÿa*

see, *ndáyɔ* (1); *natíya* (2); *ndayɔ̀*, *déyɔ̀'* (3); *ndúyà* (3 pl.); — *nitíya* (2 pt.); — *báyô* (3 pt.); — *ndeyɔma* (I-myself); *déyɔ̀'marema* (he-himself); *ndáyá'* (I-thee); *dayé* (he-me); *nateyɔ̀'* (he-thee)

seed, *náyà'*

seize (cf. also grasp), *mawátų́* (1); *marátų́* (2); *mawátɨ̀ų* (3); *mawatúlú'* (1 pl.); *mawatùlà'* (2 pl.); *mowátɨ̀ų'* (3 pl.); — *niwátų́* (1 pt.); — *magawátų* (1 fut.); *midjurátų* (2 fut.); *magɛwátɨ̀ų* (3 fut.); *mogowátɨ̀ų* (3 pl.); — *natų́wí'* (I-thee); *natatú'ų́'* (thou-me); *matú'ỳ'* (he-me); *natų́wi'* (he-thee); *nutų́wí'* (they-them); — *nawatų* (1 Tlo.); *wátɨ̀ų* (3 Tlo.); *narátų* (2 Tlo.); *nawátɨ̀ų* (3 pl.)

sell, *maygúḥwa* (1); *natúḥwa*, *matagúḥwa* (2); *maygúḥwè* (3); *nuygúḥwɛ̀* (3 pl.); *maygúḥwálú'* (1 pl.); *maygúḥwèlà'* (2 pl.); *naygúḥwa* (1); — *nimatɔḥɔ̀'má'* (it is sold); — Sub. *na-go-gu·xa*

send, *nitsaḥỳ* (1 pt.)

separate, *macɛ́'eygʊ́'* (1); *matacɛ́'eygá'* (2); *macɛ́'eygʊ̀* (3); *macɛ́'eygʊ̀ų* (3 pl.)

seven, *ḥỳvy·wa*; — Sub. *kinu·* (?)

seventy, *atsıs·kínya gúwá'* (3 × 20 + 10)

sew, *mác·mì* (1); *narác·mì* (2); *nac·mì* (3); *múc·mì* (3 pl.); — *ná·c·mì* (1 Tlo.); *ná·c·mí* (2 Tlo.); *ná·c·mì* (3 Tlo.); *núc·mì* (3 pl. Tlo.); — Sub. *na-cmi·*

shade, *mıca* (abs.); *mɛ·cɔ'* (1); *mɛ·cà'* (2); *mɛ·cɔ̀·* (3); *mɛ·cỳ* (3 pl.)

shake, *máprigʊ́'* (1); *nátaprígʊ́'* (2); *máparigʊ̀lè* (3); *múperigʊ̀lɛ* (3 pl.); — Sub. *na-spadikui*

sheep, *tcé'mbɛ'* (sing.); *tcé'mbɛ̀'* (pl.)

shine, polish, *mánirą́'ygí'* (1); *mátanirą́·'ygí'* (2), *nánirá·'ygìlè* (3), *mǔnirá·'ygìlè* (3 pl.)

shore, *ndą̀wį́'*, — Sub. *i·tu·*

short, *tcí'ı·mba*

shoulder, *pá'pú'* (abs.), *pá'pù'* (1); *pá'pá'* (2); *pá·'pù* (3); *pă·pų̀* (3 pl.); — Sub. *paxpu·* (arm)

shout (Sp. gritar), *nandjáuwá* (1), *natadjáwá* (2), *nandjáwè* (3); *nundjáwè* (3 pl.); — *mandjáuwá'la* (I-thee), *matadjáu'la* (you-me), *mandjáwa'lɛ* (he-thee); *nadjá'ùèlɛ* (he-me); — *nądjáuwa* (1 Tlo.); *nądjáuwá* (2 Tlo.); *nądjáuwè* (3 Tlo.); *ndjauwà* (3 pl. Tlo.)

show, teach (Sp. demonstrar, enseñar), *madzá'ma* (1); *matadzá'mà* (2); *madzá'mʊ̀* (3); *mudzá'mămɛnɛ̀'* (3 pl.); — *nadzá'ma* (1); — Sub. *da-su·mbi*

show, teach (Sp. demonstrar, enseñar), *masíygɔ̀* (1); *marasíygà* (2); *masíygɔ̀* (3);

musíŋgă (3 pl.); — *masíŋgá'* (I-thee); *marasíŋgɔ'* (thou-me); *nasíŋgɛ'* (he-me); *nasíŋgà'* (he-thee); *nusíŋgɛ'* (they-them)

be sick, *nakǎ·níu'* (1); *nakǎ·nú'* (2); *nakǎ·nɪù'* (3)

side, *nĭ'ŋᵛɔ́'*

sink, submerge, *nadúma'a* (1); *nadúmɔ'ɛ̌'* (2); *natadú·má'à* (3); *nudɛ̨ma'ɛ̌*

sit down, *mí'igʊ́'* (1); *nandá'ų́, mara'ų́'* (2); *ná·ŋgí'ì'* (3); *nátígì* (3 pl.)

six, *maḥvyu*; — Sub. *ma·xu*

skin (Sp. pelo), *tsʊ̨* (abs.); *tsʊ̨·* (1); *tsʊ̨·wa* (2); *tsʊ̨́ʊ̨* (3); *tsʊ̨́ʊ̨́* (3 pl.); — Sub. *caŋa·i*

skin (Sp. piel), *cta'* (sing.); *ctǎ* (pl.); *ctɔ́·'* (1); *ctá·'* (2); *ctɔ̀·* (3); *ctʊ̨́·* (3 pl.)

skin (Sp. piel), *nirí'ì*

sky, *ndʊ̨́*; *mìkù* (Tlo.)

slavering (Sp. baboso); *nimá*

slavering, *díacnų'ų*

sleep, *ná·gú'* (1); *ná·nú'* (2); *ná·gwɪ'* (3); *núnì'* (3 pl.); *núnɔ́lú'* (1 pl.); *núnùlà'* (2 pl.); — *nígú'* (1 pt.); — *mígu'* (1 Tlo.); *nánú'* (2 Tlo.); *migù'* (3 Tlo.); *núnì'* (3 pl. Tlo.); — Sub. *na-gu·*

sleeper, *ná·'gwì'* (sing.); *nǔ·'nì'* (pl.)

be sleepy, *nandɔgígú'* (1); *nandagínu'* (2); *nandɔgígwì* (3); *nandɨ̨gunì* (3 pl.); *nandalúgǔnúlú'* (2 pl.); *nandalàgunùlà'* (2 pl.)

slide, *mánirá́ŋgi'* (1); *matsaráŋgi'* (2); *nániraŋgì·ılɛ* (3); *nǔniraŋgì·ılɛ* (3 pl.)

slip, slide, *maŋgucɨ̨* (1); *maŋgucɨ* (2); *maŋgúcì* (3); *muŋgú·cɨ* (3 pl.)

slowly, *'wàmɨ̀mɛ*

be small, *taḥų'* (1); *tąḥwɨ'* (2); *tąḥwɪ'* (3); *maḥkɨ'* (3 pl.); *maḥkálú'* (1 pl.); *máḥkàlà* (2 pl.); — *làḥɨ̨* (1 Tlo.); *làḥwì* (2 Tlo.); — Sub. *tahi* (Squier)

smallpox, *cɨ́dù'*

smell, *datâ·yù*

to smell, *nandiáyó'* (1); *nandiayá'* (2); *nandiáyɔ'* (3); *nandiányɨ̨* (3 pl.); — Sub. *da-dijnᵛui* (Aragon, sentir)

smoke, *gún·í'* (abs.); *gúnio'* (1); *gúnía'* (2); *gǔniǔ* (3); *gúniɨ̨'* (3 pl.); — Sub. *gunu* (Aragon)

snake, *a·'bù'* (abs.); *a·'bía'* (2); *a·'blu'* (1); *a·'bíù'* (3); *a·'bíɨ̨'* (3 pl.); — *à'bɨ̨* (Tlo.); — Sub. *a·pu·*

sneeze, *marátsí'* (1); *matrátsí'* (2); *nará·tsì'* (3); *nurá·tsɨ* (3 pl.); — Sub. *na-si·na* (?)

snore, *na'gì'lapv* (1); *natagì'lapa* (2); *nagì'lɛ-ápù* (3); *mugì'lɛ'apǔ* (3 pl.)

so much, *sit'ą*

soft, *wábà*

be soft, *magᵛéwabà* (1); *matagᵛéwabà* (2); *magíwabàlɛ* (3); *mugíwabàlɛ* (3 pl.)

soften, *nagíwabá'* (1); *natagíwabá'* (2); *nagí·wabɛ̀'* (3); *nugí·wabɛ̌'* (3 pl.); *nugí·wabálú'* (1 pl.); *nugí·wabàlà'* (2 pl.); — *nigíwabá'* (1 pt.)

somebody, *mactá'*

something, *rìgádírigá*

son, *ádíɔ* (1); *ádíyá* (2); *ádíyɔ* (3); *ádíyɨ̨* (3 pl.)

soon, immediately, *bánívà'*

soon, *ḥwápá*

sour, *mí·ga·'*; — *mígá* (Tlo.); — Sub. *mi·ka*

sow, *'ma·du* (1); *'maladu* (1); *'ma·ˇ'* (3); *'mú·dɪ'* (3 pl.); — Sub. *na-ga·du*

speak, *mat·à* (1); *marat·à* (2); *mát·ɛ̌* (3); *nót·ɛ̌'* (3 pl.); *mut·álú'* (1 pl.); — *ara't·ą'* (tell him); *aratù'* (tell me); — Sub. *na-da-ta*

speaker, *nát·ɛ̌* (sing.); *nót·ɛ̌'* (pl.)

spider, *gaɔ* (abs.); *gayɔ́'* (1); *gayà'* (2); *gayô* (3); *gan·yɨ̨* (3 pl.); — Sub. *a·xka*

spit, *mandú·t·á'* (1); *matadú·t·á'* (2); *mandɔ́·t·ɛ̀'* (3); *nundɔ́·t·ɛ̀'* (3 pl.); — Sub. *na-cn'dotá*

squirrel, *tcìctuyà, tìctuyà*; — *tsúiyá'* (Tlo.); — Sub. *bi-si·ijaha*

stand, *mawáḥɨ́* (1); *manyáḥɨ́* (2); *magwiḥì* (3); *mawąnḥwì* (3 pl.)

stand (tr.), *matsíḥí* (1); *matatsíḥi* (2); *matsíḥì* (3); *mutsíḥì* (3 pl.; — Sub. *na-gvixi*)

star, *tcá·gwą* (sing.); *tcágwɨ́'* (pl.); *tcá·gíų'* (1); *tcá·gíą'* (2); *tcágíɨ̨'* (3); *tcagíɨ̨'* (3 pl.)

steal, *má·ni kú'á'* (1); *mátanikú·á'* (2); *mánikúɛ̀'* (3); *ninikúwɛ̌'* (3 pl.); — Sub. *na-guxa*

stench, *dă·skà*; — Sub. *na-da·ska* (smell)

stick, *ma'kámɔ*, *mara'kámɔ* (1); *matra'kámá* (2); *mara'ká·mo* (3); *mora'ká'mì* (3 pl.)

stick (tr.), *maŋgí'má* (1); *matakí'má* (2); *maŋgɛ́'mɛ̀'* (3); *mvŋgɛ́'mɛ̀'* (3 pl.)

stir (Sp. batir), *maŋgᵑɛŋgɔ̀* (1); *matagᵑɛŋgà* (2); *magᵑéŋgɔ̀* (3); *mvŋgᵑɛ̨ŋgà* (3 pl.); — *nagìnyu* (1 Tlo.); *nagìnyí* (3 pl. Tlo.)

stomach, *áɰ̨ʾ* (1); *áɰ̨waʾ* (2); *áɰ̨* (3); *áɰ̨* (3 pl.); — *áɰ̨* (1 Tlo.); *ą́wa* (2 Tlo.); — Sub. *na-vaŋnɔ*

stone, *í·tsíʾ* (sing.); *itsìˀ* (pl.); *í·tsúʾ* (1); *í·tsáˑʾ* (2); *í·tsòˀ* (3); *í·tsɰ̨ˀ* (3 pl.); — Sub. *sì·nu·*

stoop, squat, *mabami·ɳdvʾ* (1); *matabami·ɳdaʾ* (2); *mabamí·ɳdùʾ* (3); *nubamí·ɳdɰ̨ʾ* (3 pl.); — *nasŋgádù* (1 Tlo.); *natasŋgádù* (2 Tlo.); *nasŋgádù* (3 Tlo.); *esŋgádù* (3 pl. Tlo.)

stop, cover (Sp. tapar), *maŋgóga* (1); *matróga* (2); *maŋgogãlɛ* (3); *mvŋgogãlɛ* (3 pl.)

stretch out, *maramátɔˀ* (1); *matramátaˀ* (2); *maramátɔ̀ˀ* (3); *muramátùˀ* (3 pl.)

strike (Sp. azotar, pegar), *mác·núʾ*, *nác·núʾ* (1); *márac·náʾ* (2); *mác·nùʾ* (3); *múc·nãʾ* (3 pl.); — *níc·núʾ* (1 pt.); *nirá·c·na, nindác·na* (2 pt.); *nac·nąʾ* (I-thee); *nandacnɰ̨ʾ* (thou-me); *nac·nɛ̃ʾ* (he-me); *nac·nàʾ* (he-thee); *nuc·nãʾ* (they-them); — *nacvnú* (1 Tlo.); *narac·ná* (2 Tlo.); *nác·nu* (3 Tlo.); *nagúcna* (3 pl. Tlo.); — Sub. *na-da-dusna*

sun, *á·ˈkáʾ* (abs.); *á·ˈkúʾ* (1); *á·kùʾ* (2); *á·kɰ̨ɔ̀ʾ* (3); *á·ˈkɰ̨ʾ* (3 pl.); — Sub. *d-axka·-lu*

so sun, *natágu*ʾ (1)

swallow, *má·gáˈŋgɔʾ* (1); *migɣˈŋgáʾ* (2); *ma·gǎˈŋgɔ̀ʾ* (3); *muwáˈŋgɰ̨ʾ* (3 pl.)

sweat, *maˈwigɰ̨́* (1); *maˈwigą́* (2); *naˈwigàʾ* (3); *nuˈwigɣ̨ˀ* (3 pl.); *nuˈwigálúʾ* (1 pl.); — Sub. *na-va·kia*

sweep, *maŋgí·cì* (1); *matagí·cì* (2); *maŋgícì* (3); *muŋgícì* (3 pl.)

sweeper, *naŋgí·cì* (sing.); *nvŋgí·cì* (pl.)

sweet, *dá·s·ɔ·*

swell, *ná*ʾ*ɰwà*

swim, *naˈmaˈyoʾ* (1); *naˈmaˈyúʾ* (2); *naˈmaˈyòʾ* (3); *naˈmaˈnyòʾ* (3 pl.)

swing, *maɧmaˈŋgánᵛo* (1); *maɧmaˈŋgánᵛi* (2); *maɧmaˈŋgánᵛìˀ* (3); *muɧmaˈŋgányìˈmeˈnɛ̀* (3 pl.); — *namąˈŋganᵛiʾ* (I-thee); *natamąˈŋgánᵛóʾ* (thou-me); *namąˈŋgánᵛùʾ* (he-me); *namąˈŋgánᵛìʾ* (he-thee); *numąˈŋgánᵛi* (they-them)

swing, *napàˈŋgɰ̨* (1); *napàˈŋgą́ˈyi* (2); *napą́ˈŋgą́ʾì* (3); *numvŋgą́yɣ̨* (3 pl.); *numvŋgąyálúʾ* (1 pl.); *napàˈŋga* (something swung)

talk, *naniḍjákɰ̨́* (1); *natàniḍjákɰ̨́* (2); *naniḍjákɰ̨* (3); *nuniḍjákɰ̨* (3 pl.)

tall, big, *waɧɰ̨́*ʾ

tamale, *è·bà* (abs.); *è·bɔ̀*ʾ (1); *è·bàʾ* (2); *è·bɔ̃·* (3); *ı·bɰ̨̃·* (3 pl.)

ten, *ŋgú·á*ʾ; — Sub. *gva*

that (Sp. aquel), *tsû·ɰ́*ʾ

the, *kami*

theirs, *kwéntɰ̨*

then, *cukìˀ*

then, *núku*

there, *nyúúʾ*; — *nyúɰ̨́*ʾ (Tlo.)

they (dual), *ikɰ̨*

they (pl.), *ikɰ̨*; — Sub. *ikanu* (Squier)

thin, *mí·dúʾ* (abs.); *mídɰ̨ʾ* (1); *midìʾ* (2); *mídì* (3); *mídɪŋ* (3 pl.); — *smídú* (Tlo.)

be thin, *ɔ·mídɰ́*ʾ (1)

think (Sp. pensar), *nátsíɧìʾ lákɪoʾ* (1); *nátátsíɧi lákɰ́*ʾ (2); *nátsíɧi lɛakɪǫ́*ʾ (3); — Sub. *na-diaxa*

be thirsty, *nakandáoʾ* (1); *nakandáwaʾ* (2); *nakandáɔ̀*ʾ (3); *nukandá·ɰ̨*ʾ (3 pl.); *nakandáwálúʾ* (1 pl.); *nakandáwàlàʾ* (2 pl.); — Sub. *na-nta·u·*

this, *tsıgìˀ*; — Sub. *kagi* (Squier)

this (Sp. ese), *dzvˈɰ́*ʾ; — Sub. *a·su·*

three, *àɧtsù*

throw (Sp. tirar), *mádáʾ* (1); *matádáʾ* (2); *mádɛ̀*ʾ (3); *nódɛ̀*ʾ (3 pl.); — Sub. *ga·du·*

throw (Sp. echar), *narîˈíyáʾ* (1); *nandrîˈíyá, natrîˈíyáʾ* (2); *narɛ̂ˈɛyɛ̀, narí·ˈíyɛ̀*ʾ (3); *norɛ̂ˈéyɛ̀*ʾ, *nurîˈyɛ̀*ʾ (3 pl.)

throw (Sp. echar), *márakwà* (1); *mátrakwà* (2); *márakwà·ˈ* (3); *múrakwàˈ* (3 pl.); — *narákwa* (1 Tlo.); *natrákwa* (2 Tlo.); *narakwà* (3 Tlo.); *narakwã* (3 pl. Tlo.)

throw down, destroy, *manyą́wìʾ* (1); *matıá·wìʾ* (2); *manyą́·wìʾ* (3); *munyą·wìʾ* (3 pl.)

thunder, *nąwɰ̀ˈ*; — Sub. *nadua* (Squier)

thus, *cékɔ̀*

tibia, *naŋgegɔ̀·ˈ*

tie, *marɔɔ*ʾ (1); *matárɔuwà, matrauwá* (2); *marɔɔ̀ˈ* (3); *muruwãˈ* (3 pl.); — *naruwàʾ* (I-thee); *natrɔ̀ɔ̀*ʾ (thou-me); *narú·wɛ̀*ʾ (he-me); *naró·uwàʾ* (he-thee); *nurú·wãʾ* (they-

them); — *nárao'* (1 Tlo.); *natrú'wa'* (2 Tlo.); *naróó* (3 Tlo.); *narúwà* (3 pl. Tlo.)
be tied up, *ctu'ɥwa'mɥ̀* (1); *ctu'wa'mà* (2); *ctú'wá'mì'* (3 pl.); — Sub. *na-stɔxma*
tiger, wild-cat, *índì* (abs.); *índu'* (1); *índà'* (2); *índù'* (3); *índɥ̀'* (3 pl.); — Sub. *endi·*
tighten, press, *máni'ic·à'* (1); *matsi'ic·à'*, *matatsi'ic·à'* (2); *maní'cè'* (3); *muní'c·ɛ̀·'* (3 pl.); — *náco* (1 Tlo.)
tighten, press, *natcipà'* (I-thee); *natatcípɥ'* (thou-me); *natcípɥ̀'* (he-me); *natcípà'* (he-thee); *nutcípà* (they-them)
be tired (Sp. fatigar), *wa'ᵃskùmɥ̀* (1); *wa'skàmɥ̀'* (2); *wá'skù* (3); *wá'skɥ̀* (3 pl.)
be tired (Sp. cansarse), *wa'gɥ́'* (1); *wa'gɥ́'* (2); *wa'gà'* (3); *wa'gɥ̀* (3 pl.); — *ní·ɪŋgu'* (1 Tlo.); *ní'ɪŋgò* (3 Tlo.); *ní'ɪŋga* (2 Tlo.); *ní'ɪŋgɥ̀* (3 pl. Tlo.); — Sub. *na-xku* (?)
be tired (Sp. cansarse), *wa'gúma'* (1); *wa'gámá'* (2); *wa'gàmà'* (3); *wa'gɪmà'* (3 pl.)
tomorrow, *á'tsí·*
until tomorrow, *datsi'ka*
tongue, *ndúɦɥ* (abs.), *ndúɦɥ̀* (1), *ndúɦwá* (2); *ndúɦɥ̀* (3); *ndúɦɥ̀* (3 pl.); — Sub. *du·xa*
tooth, *ɨnᵛɔ̀·* (abs.); *ɨnᵛo'* (1); *ɨnᵛa'* (2); *ɨnᵛɨɥ̀* (3 pl.); *ɨnᵛɔ̀* (3); — Sub. *si·nᵛa*
tortilla, *gɥ́'ma'*; — Sub. *ta-gu·ma*
touch (Sp. tocar), *ma'dù'* (1); *matadù'* (2); *ma'dɪ̀'* (3); *mu'dɪ̀'* (3 pl.); — Sub. *na-da·u* (fühlen)
touch, try (Sp. tentar), *maᵘwát·ɥ̀* (1); *marat·ɥ̀·* (2); *maᵘwat·ɥ̀* (3); *mùwat·ɥ̀* (3 pl.)
tree, *íc·í* (sing.); *ìcì* (pl.); *éc·ɔ̀'* (1); *éc·à'* (2); *éc·ɔ̀* (3); *éc·ɥ̀* (3 pl.); — *ìcì* (Tlo.); — Sub. *i·ci*
tread, *máɦɥ̨gadɥ̀* (1); *mátaɦɥ̨gadɥ̀* (2); *máɦɥ̨gadɥ̀* (3); *núɦɥ̨gadɥ̀* (3 pl.)
trunk, *ts·ɪmíndù'*
twice, *á·p·ù'*; — Sub. *a·pu·* (two)
two, *áɦma*
turkey, *rú·ndu'* (sing.); *rú·ndù'* (pl.)
turtle, *ŋgú·tsí'* (abs.); *ŋgú·tsù'* (1); *ŋgú·tsíà'* (2); *ŋgú·tsíù'* (3); *ŋgú·tsíɥ̀'* (3 pl.)
twenty, *mbaskínɔ'*
twist, *ma'ŋgúní'* (1); *mata'ŋgúní'* (2); *ma'ŋgúnì'* (3); *mᵛŋgúnì'* (3 pl.)
ugly, *cúwɥkɔ̀*
ulcer, *s·kà* (abs.); *s·kɔ̀'* (1); *s·ká'* (2); *s·kɔ̀'* (3); *s·kɥ̀'* (3 pl.)
uncle, *am·ɥ*
understand (Sp. comprender), *mawá'i'* (1); *matawá'i'* (2); *nawá'ílɛ* (3); *muwá'ílɛ* (3 pl.); — *nádjɥ* (1 Tlo.); *natádjɥ* (2 Tlo.); *ná'djɥ̀* (3 Tlo.); *nú'djɥ̀* (3 pl. Tlo.)
understand (Sp. comprender), *mandjá'ɥ* (1); *matándjá'ɥ̀* (2); *nandjá'ɥ̀* (3); *nundjá'ɥ̀* (3 pl.); — Sub. *na-datco-ma*
undress, *manibaca'míná* (1); *matà·nibaca'mína'* (2); *manibáca'mɪnɛ̀'* (3); *munibáca'mínɛ̀'* (3 pl.)
untie (Sp. soltar), *maniɥ́'* (1), *matatsíɥá*, *maniɥá'* (2), *maniɥù'* (3), *munɪɥà'* (3 pl.)
untie (Sp. desatar), *mara'kú* (1), *matára'kuwí* (2); *marákù* (3); *múrakwɪ'* (3 pl.); — *narígu*, *natrígu* (1 Tlo.); *natrígwì* (2 Tlo.); *narígwì* (3 Tlo.); *narigwɨ̀* (3 pl.); — *marákwɨ'lɛ* (I-thee); *matrákɥ́·'la* (thou-me); *maráku·ɥ̀lɛ* (he-me); *narakwí·ɨ̀lɛ* (he-thee); *nurakwì·ílɛ* (they-them)
until, *à'ndù*
urine, *mícú'*
urinate, *namícú'* (1); *matamícá* (2); *namícù'* (3); *mąwícɥ̀* (3 pl.); *mąwícúlú'* (1 pl.); *mąwícàlà'* (2 pl.), — Sub. *na-mi·cu·*
vagina, *ébɔ̀ a·gu*
be of value, *númu'* (1); *númá'* (2); *númù'* (3); *númɥ̀* (3 pl.); — Sub. *na-nu·ma·*
vein, *gakù*
violently, *wá·p·a*
violet, mulberry-colored, *mí'ɪnyɥ̨*
virgin, *tcá·gú*
voice, *áɦŋgɔ'ɔ*; — Sub. *dayua*
wake up, *mánibá·ɦyu* (1); *mátsɪbá·ɦyi* (2); *nánibáɦyù* (3); *núnɪbá·ɦnyù* (3 pl.); — *mánɨbáɦyà'* (I-thee); *matánɨbáɦyì'* (thou-me); *mánɨbaɦyà'* (he-thee); *mǔnɨbáɦyɛ̆'* (they-them)
wake up, *daɦíyɔ'* (1); *daɦíyá'* (2); *daɦíyù* (3); *daɦí·yɥ̀* (3 pl.); — *baɦíyɔ'* (1 pt.)
walk, crawl (of animals), *karámá'*
walk to and fro, *mac·núcĭŋgá* (1); *mandac·nácĭŋgá* (2); *mac·núcìŋgà* (3); *nuc·nácíŋgà* (3 pl.)

wall, *niˈnyù·uctù'wa*
wash, *má·ˈnᵛà* (1); *marά·ˈnᵛà* (2); *ná·ˈnᵛè* (3); *núˈnᵛè* (3 pl.); — *níˈnᵛà* (1 pt.); *níˈnyamά'* (I wash myself); *nénᵛèmaremά* (he washes himself); — *maˈnyà'la* (I-thee); *maraˈnᵛù'la* (thou-me); *maˈnᵛùlɛ* (he-me); *maˈnᵛàclɛ* (he-thee); *muˈnᵛà-èlè* (they-them); — Sub. *na-vinu·*
wasp, *ctíyά'* (sing.); *ctìyà'* (pl.); — *áˈma* (Tlo.); *ctí·yά'* (wasp-hive, Tlo.)
to watch (Sp. velar), *maˈŋgaˈwì* (1); *matą́gaˈwì* (2); *maˈŋgάˈwì* (3); *nvˈŋgάˈwì* (3 pl.)
to watch (Sp. guardar), *mándiacί'* (1); *mátiacί'* (2); *nándiacìlɛ* (3); *múndiacìlè* (3 pl.);
— Sub. *na-gu·ci·*
water, *íˈya'* (abs.); *eˈyɔ* (1); *eˈyà'* (2); *eˈyɔ'* (3); *eˈnyù'* (3 pl.); — *iˈya'* (abs. Tlo.); *íˈyɔ'* (1 Tlo.); *íˈyά'* (2 Tlo.); *íˈyɔ'* (3 Tlo.); *i·nyù'* (3 pl. Tlo.); — Sub. *i·ïja*
to water, *ná·ŋgóḥíά'* (1); *natagóḥíά'* (2); *nάŋgoḥíyɛ̃'* (3); *nɔ́ŋgoḥíyɛ̃'* (3 pl.)
water-melon, *baděyàˈ* (abs.); *badéyɔ'* (1); *badě·yά'* (2); *badě·yɔ̀* (3); *badě·nyùˈ* (3 pl.)
wave, *miˈnu*
we, *ikálú*; — *ikącco* (Tlo.)
weak, *wábά'*
weave, *macumù* (1); *matacúma* (2); *macúmù* (3); *macumą* (3 pl.)
a well, *yáḥ·yά'* (abs.); *yaḥ·íɔ́'* (1); *yaḥíά'* (2); *yaḥ·ìɔ̀'* (3); *yaḥuù'* (3 pl.)
be well, *ctámaḥą́'* (1); *ctámaḥà'* (3)
wet, moisten, *maḥa* (1); *ramaḥa* (2); *maḥè* (3); *maḥɛ̃ˈ* (3 pl.); *maramaḥa, naramaḥa* (1); *matramaḥa* (2); *maramaḥè* (3); — *nimaḥa, niramάḥa* (1 pt.); — *nikamάḥa* (I was going to moisten); *nidjotămaḥa* (you were going to moisten); *nìkɛmaḥè* (he was going to moisten); *nimuḥɔ̀* (I-myself); *nimaḥą́* (thou-thyself); *nimuḥà* (he-himself); *nimaḥà* (they-themselves); — *magamuḥɔ* (I will wash myself); *midjvtrămaḥamíˈnà* (thou will wash thyself); *magerámaḥamɛ́ˈnɛ̀'* (he will wash himself); — *maramάḥą* (I-thee); *matsumúhų* (thou-me); *maramuḥù'* (he-me); *maramuḥù'* (he-thee); *muramάḥamɛ́ˈnè* (they-them); *maramaḥį́'* (I-them); *matsaramaḥì'* (thou-them); *maramaḥì'* (he-them)
whatever, *djŏgó·gά'*
whatever person, *că·tsì*
when, where upon, *dakádı*
when, *ànidi*
when, *ḥwă·n·á'*; — *gwáná* (Tlo.)
where, *ŋgwà·ˈ*; — *ná* (Tlo.)
whistle, *narámí'* (1); *natrámí'* (2); *naramì'* (3); *nurámìˈ* (3 pl.); — *narámi* (1 Tlo.); *natrámi* (2 Tlo.); *naramì* (3 Tlo.); *narámì* (3 pl. Tlo.)
white, *mí'ica*; — Sub. *mica*
be white, *mi·cą́'*; *mi·cą́'* (2); *mí·ca* (3); *mí·cį* (3 pl.); — *mi'icά* (Tlo.)
who, *cà*; — Sub. *su-la* (Aragon)
why, *ná·ḥŋgά'*
why, *dìnumᵩ́, nanumᵩ́*
be wild, brave, *ckanᵛǫ́'* (1); *ckáŋwi'* (2); *ckáwi'* (3); *ckáwį* (3 pl.); — Sub. *na-gaïju*
be wild, *nakínɔ́'* (1); *nakínά'* (2); *nakí·na* (3); *nukí·ni* (3 pl.)
be wild, *nakinùnᵛù* (1); *nakinànᵛù* (2)
wing, *cpípi*
wink, *nɔŋgά'ų*
to wish, *ánda* (1)
to wish, *tsíyú'* I do not wish
with, *ḥmà*; — Sub. *ma*
with, *ga*
woman, *á'ᵘgɔ̀* (abs.); *á'ᵘgıɔ́'* (1); *á'giά'* (2); *á'giɔ̀ˈ* (3); *á'giǫ̀ˈ* (3 pl.); — Sub. *-gu*
to work (Sp. labrar), *matsuˈtùˈ* (1); *mátatsuˈtùˈ* (2); *nátatsuˈtì·ˈ* (3); *mutsuˈtį́* (3 pl.)
work (Sp. trabajo), *nᵛaḥùˈ*
to work (Sp. trabajar), *manᵛaḥą́'* (1); *matuaḥą́'* (2); *manᵛąḥwì'* (3); *munᵛáḥwì'* (3 pl.); — Sub. *na-nᵛaxu*
worker, *nanyaḥą́ù'* (sing.); *nunyaḥą́wi* (pl.)
worm, *àdɔ̀ˈ* (abs.); *adıɔ́'* (1); *adıà'* (2); *adíɔ̀ˈ* (3); *adíǫ̀ˈ* (3 pl.)
to wound, *nirútì* (1); *nitróti* (2); *nìrútì* (3); *nirútìˈmɛ́ˈnè* (3 pl.)
year, *tsi·gu*; — Sub. *sigu* (Squier)
yellow, *mùˈmù'*; — *mɔ̀ˈmɔ̀ˈ* (Tlo.)
yes, *cú·kì*
yesterday, *dìc·ì'*; — *rícί* (Tlo.); — Sub. *di·ci·i*

you (sing.), *ikᾳ'*; — Sub. *ika·*
you (pl.), *ikᾳla*
young (of animals), *i'nyù*
your, *kwéntá'*
red zapote, *dú·ná'*; — Sub. *du·na*

Texts[1]

I.

**madrɛ *mià, à'n·i díkᾳ makányᾳ',*
Nother mine, when I die,

*atádᾳ' *l·á' *lugar ŋgwà' naká'la'ag-*
bury(me) the place where you burn light

wà'.
yours.

bă·mbabi'i, bă·mbabi'ì dimídjù' táni
Every day, every day, that-you-go doing

*gŏ'ma'. íkì' gatabià' *por nvmbwíkᾳ'·*
tortillas. There you wept for me myself·

ts·ᵩmodì' mactà' cá·tsi' maracà'
If anyone something asks you

*nà'ŋga matabià', *puɛs aratᾳ dînumᾳ*
why you weep, well tell him because

ɯci rîndi' nígùnì', kami gúnì
wood green its smoke, the smoke

nanᾳgwa nambi·iya
makes me I weep.

II.

*àni dinătsí numbă' *luna*
When it dawns the earth moon

*nawiyù' *i' kámí tcagwᾳ nundatigᾳ·lè*
is extinguished and the stars disappear

**i kámí' dᾳ nakatíyà'. tcémbè' notségè'*
and the sky lights up. Sheep jump

kámí' í'nyᾳ notsᾳ; nyù'ᾳ
the young (animals) play; birds

*nundjá·wè' *i kámí' rú·ndù' nuprɯgúli*
shout (sing.) and the turkeys shake

apᾳ. à'ndùkimi ctílà nuprɯgú[u]lè
their necks. Even also chickens shake

*apᾳ· *i kámí' nyú'ᾳ nvŋg[v]ùni*
their neck and the birds (of) sadness

ɔnandjá·wè·
sing (shout).

nyú'ᾳ ŋgwà ctᾳ a'ɯwà'
There where at foot of mountain

wiḥí gɔ̃'ɔ ikì' higi ág[v]ɔ'
there lies my house there there is my wife

kámí' a'kɯᾳ.
the my heart.

[1] The texts have not been normalized. The first two represent recitations given at the Casa Indígena which my informant insisted upon giving me. Spanish forms are marked with an asterisk.

A SKETCH OF ACHUMAWI PHONETICS.

By H. J. Uldall.

The material for this sketch was collected partly during a short stay in Alturas in the summer of 1931, and partly in Berkeley the following autumn, when two young Achumawis came down and stayed for a little over a month.

I am deeply indebted to my friend Dr. de Angulo, who not only placed at my disposal his extensive knowledge of the Achumawi language but even extended his hospitality to my two informants during their visit to Berkeley.

I also beg to express my gratitude to the Committee on Research in Indian Languages, who has defrayed the expenses, and on whose initiative this study was undertaken.

§ 1. *Consonants.*

	Bilabial	Post-alveolar	Palatal	Velar	Pharyngal Uvular	Glottal
Plosives	*p b*	*t d*		*k g*	*q ɢ*	'
Affricates		*ts dz*				
Nasals	*m*	*n*				
Laterals		*l*				
Fricatives		*s*			*ħ*	*h*
Semi-vowels	*w*		*y*	*(w)*		
Close	*(u)*					
Half-close						
Half-open	*(ɔ)*					
Open						

The bi-labials are pronounced as in English.

The post-alveolars are formed a little further back than English *t* and *d* in *ten* and *den*. Thus *s* is in between Eng. *s* and *ʃ*. Some speakers, mainly younger people, tend to pronounce *ʃ* for *s* and *tʃ* and *dʒ* for *ts* and *dz*, possibly, at least as far as the affricates are concerned, under the influence of English. A similar development in the speech of the younger generation has been observed in Pomo.

y is pronounced much as in English though sometimes with a little more friction, especially in long *y (yy)*.

k and *g* as in English.

q and *ɢ* are uvular plosives with an accompaniment of pharyngal contraction, which influences the quality of the following vowel. The two plosives are the principal members of two variphones, the subsidiary members being *χ* and *ʁ* respectively. Apparently *q* and *χ*, *ɢ* and *ʁ*, are absolutely interchangeable; it has not been found possible to formulate any rule for the distribution of these sounds in speech. It is interesting to note that while *ʁ* is merely a *ɢ* with incomplete occlusion, being in other respects identical with *ɢ*, *χ* is articulated a good deal further forward than *q* and has no pharyngal contraction. The fricative corresponding to *q* would have been practically indistinguishable from *ħ*, which is a separate phoneme.

ħ is a voiceless pharyngal fricative of the same type as Arabic ح. The pharyngal contraction affects the quality of preceding or following vowels.

The glottal stop appears to be interchangeable with *h* before voiceless plosives and *ts*. For a description of the employment of this sound, see below under *Length*.

p, *t*, *k*, *q* are aspirated. The aspiration is usually fairly strong but nevertheless easily distinguishable from a proper *h* following a plosive. Thus in *ˉwiˉniˉpˉhaːˉdzi*, to be fat,

the *h* is considerably longer than the normal aspiration after *p* in a word like *ˉsa:ˉpi*, boat[1].

The symbols *b*, *d*, *g* stand each for a variphone, whose principal member is an "intermediate" plosive with glottalized and voiced plosives as subsidiary members. In other words, *b* may be pronounced *b̥*[2], *p'*, or *b*; *d:ḍ*, *t'*, or *d*; *g:g̊*, *k'*, or *g*. What distinguishes this series of plosives from the series discussed above, is thus lack of aspiration. It has not been possible to find any rule as to when one should glottalize and when not; the same speaker will sometimes use *g̊* and sometimes *k'* in the same word without, apparently, being aware of any difference except, possibly, one of emphasis. These plosives are, however, never fully voiced except occasionally in intervocalic position.

dz and *ɑ* are always voiced.

ts and *dz* are true affricates, i. e. single sounds, not combinations of *t* and *s*, *d̥* and *z*.

In medial position the voiceless plosives and *ts* occur only after voiceless fricatives — *h* being in this position interchangeable with the glottal stop as already mentioned. Since this rule is absolutely without exception, the *h*'s before aspirated plosives have been left out in the transcription.

It was at first supposed that the rather weak *h* which, in the absence of *s* or *ɬ*, is always heard before voiceless plosives and affricates, were due to regressive assimilation, but a morphological analysis of a number of verbal froms has shown that this is not the case. On the contrary it has been found that ideally sonant plosives and affricates are replaced by their surd correspondants when added to a stem ending in a voiceless fricative.

Examples: *_ɬay_du_tsi* to think, ideally **_ɬay_duh_dzi*.

[1] Kymograph records showed an average length of 17 mm for h as against 7 mm for the aspiration of p in the second word. However, not enough tracings were obtained for the experiment to be of any scientific value except as an illustration.

[2] The diacritical mark ₀ above or below a letter indicates lack of voice.

The infinitive of the auxiliary verb "to be" is normally *dudzi* but in composition with certain unalterable particles (of which *ɬay* in the example above is one), it is unaccountably altered to *dutsi*. The most common example is the composition with *tsɛ-*, the negative particle: *ˉtsɛ_du_tsi*, not to be. Here the unvoicing of *dz* is felt so strongly that the form *_du_tsi* carries a negative meaning even when the *ˉtsɛ* is left out. Thus *ˉdam_mi:ˉgu_du_tsi_suˉwa* I will not eat (literally: of eating not to be I am).

When the aspirated plosives and *ts* occur after a liquid, the necessary breath takes the form of a partial unvoicing of the liquid. Thus in a word like *ˉamˉtaːˉla_dzan* young woman, the last part of the *m* is unvoiced.

The aspirated plosives are always exploded, even before consonants, while the unaspirated series are only released in front of vowels. Thus in *ˉbəˉlaq_miːˉwiˉtsi* a long time ago, the *q* is exploded and aspirated before the formation of the bilabial closure for *m*, whereas in *ˉulˉlɔʾɑ_ma* in the evening, the *ɑ* is released after the lips have been brought together.

Aspirated plosives are also released before glottal stop, e. g. in *ˉhukˉʾɛ* over there. Whenever the sequences *k'*, *t'*, etc. occur in the transcription, they should, therefore, be interpreted in this way, never as glottalised *k*, *t*, etc. Such sounds occur but belong to the *g-*, *d-*, etc. phonemes as explained above.

When two identical plosives occur together, they are not released separately but form one long stop with one explosion, as in *_ɬakˉkiː_gam* two people. The same applies to the combination *tts*, e. g. *ˉhaˍaˉkatˍtsaːˉgu*, when we all cut, while in *_ɬak_tsan* two, *k* is released before the formation of the stop for *ts*.

When two plosives of the unaspirated series are brought together, they are always completely voiceless though they do not become aspirated. Thus *ˉsaˍaˉkadˉgu* when I cut, is pronounced *ˉsaˍaˉkaḍˉgu* or, often, with a glottalised *k̓*. This is also true of double plosives of this series, thus in *ˉdiːˍtɔgˉguˍyuˉwa* he will come back here, the *gg* is voiceless but not aspirated.

A *dz* added to any plosive always becomes *ts*, thus ˉ*san_u_aˉkatˉtsuˉwi* I cut around inside the house, is ideally *ˉ*san_u_aˉkadˉdzuˉwi*.

The uvular nasal, *ɴ*, occurs occasionally as a subsidiary member of the *m*-phoneme before *q*. However, this assimilation has only been noted in one word, and then not always: *_aɴˉqa* or *_amˉqa* then.

In certain words *y* and *w* are interchangeable without change in the meaning. Thus ˉ*sinˉtəˉluˉu ˉmu:ˉyi* or ˉ*sinˉtəˉleˉuˉmu:ˉwi* I work for him.

In final position all sounds, vowels and consonants alike, tend to become at least partially devocalised.

This tendency has been crystallised in the regular shift from unaspirated to aspirated plosive in those verbs, which do not add a vowel to the collapsed stem[1]. Thus ˉ*saˉniˉwa:ˉdi* I dance the war dance, but ˉ*liˉniˉwat*, let me dance the war dance.

Metathesis occurs regularly in a number of verbs of the first conjugation, e. g. ˉ*diˉduˉwa'_i* to search, ˉ*liˉduˉway'* let me search. A kind of optional metathesis exists with the consonant cluster *kts*, thus you can say ˉ*ham_mits_ka* or ˉ*ham_mik_tsa* I am eating you.

§ 2. *Vowels.*

There are six pure vowel phonemes in Achumawi, of which the principal members have been plotted on the Cardinal Vowel diagram in the sound chart. They are all of the "lax" variety, and, with exception of *ə* and *a*, they are all a little closer when they are long than when they are short. All the vowels occur both long and short, except *ə*, which is always short.

Rearticulated vowels occur quite frequently but seem to be equivalent in every respect to ordinary long vowels. No attempt has been made, therefore, to distinguish rearticulated from long vowels in the transcription, except where there is a difference in tone between the two parts of the vowel. e. g. ˉ*da_aˉkaˉ:ˉdi*, to cut.

ə is a "neutral" vowel, i. e. its exact quality is unimportant and in any case very difficult to determine as the vowel is always extremely short. In many cases it may be left out completely, thus, I work for him: ˉ*sinˉtəˉluˉuˉmu:ˉyi* or ˉ*sinˉtluˉuˉmu:ˉyi*. Since *t* is in any case released and aspirated before the formation of *l*, the existance of *ə* depends only on whether the vocal chords begin to vibrate a little before the tongue takes up the position for *l*.

The most important subsidiary members of the vowel phonemes are those employed in the neighborhood of consonants with pharyngal contraction, *q*, *ɑ*, and especially *ħ*. The pharyngal contraction is extended to the vowel both progressively and regressively producing that peculiar quality characteristic of bad singers with a "throaty" voice. At the same time the tongue positions are retracted and lowered.

There are three diphthongs, *ay*, *ɛw*, and *ɔw*, which are simply glides between the normal Achumawi vowels *a* and *i*, *ɛ* and *u*, and *ɔ* and *u*. In contact with *ħ*, *ɔw* becomes centered to *əw*.

There is a tendency, especially among younger people, to pronounce *ɛy* for *ay*.

In certain words it is possible to pronounce *a* or *i*, seemingly ad libitum and without change in the meaning of the word. Thus ˉ*sin_uˉaˉkaˉ:ˉdi* or ˉ*san_uˉaˉkaˉ:ˉdi*, I cut. In the transcription such words have been written with the vowel pronounced by the informant at the time when the text was taken down.

§ 3. *Length and Rythm.*

There are two chronemes in Achumawi, long and short, a long vowel being approximately double the length of a short one. Pairs of words distinguished only by length are not very plentiful but can be found, thus ˉ*liˉwam*, I will steal, ˉ*liˉ:ˉwam*, I will be tired.

[1] See "The Achumawi Language" by J. de Angulo and L. S. Freeland. Int. Jour. of Amer. Linguistics, vol. VI, no. 2.

As has been mentioned, a long vowel is often heard as rearticulated, e. g. *ˉsaˉaˉma*, I eat. This may be a rudiment of an old functional distinction, but at the present time it does not appear to make any difference whether you say *ˉsaˉaˉma* or *ˉsa:ˉma*. The slight breath (or glottal stop) heard in front of aspirated plosives, is "taken from" the length of the preceding vowel, so that, while the vowel is shortened, the combined length of the vowel and the *h* is equal to the length of a vowel before, say, a liquid, i. e. a vowel with no *h*. Thus, in a word like you cut!: *ˉda:ˉka:_da* or, more accurately, *ˉda·hˉka:_da*, the first *a* is definitely shorter than the second *a*, but *a·* plus *h* is equal in length to *a:*.

All the consonants occur both long and short except, possibly, *h* and *ħ* — by which is meant that no examples have been found of long *h* or *ħ*, although there is theoretically no reason why they should not occur in Achumawi.

The glottal stop is always long except when it occurs after a consonant and in those cases, already mentioned, when it is interchangeable with *h*. Thus in *ˉtsu_wiˉtɛ:ˉwit_ma_dziˉ'i*, do ye (2) understand?, and in *_tsiˉhaˉ'tsa:ˉlaˉduˉwi*, we two were standing around, we have a long glottal stop, while it is short in *_dzi_hi:sˉ'i*, we two said.

Even more important than the length of single sounds, though of course dependent on it, is rythm, the length of syllables. Here again we have only two degrees, long and short, but the continually changing rythmic patterns are, one feels, a fundamental feature of the language comparable to the rise and fall in pitch and far more basically important in Achumawi than in English or any other modern European language.

It is impossible to give valid proof of this assertion without long and careful researches in the laboratory, and it will therefore have to stand as the author's subjective impression of the language, since he has had neither the time nor the facilities for extensive experimental work.

The following types of syllables have been found:

a. short syllables:
1. short vowel; *_iˉtu:_ni*, our two.
2. sh v + sh c; *_amˉqa*, then
_is_si, in the middle.
3. sh c + sh v + sh c; *_ħak_tsan*, two.
4. sh c + sh v; *_yu_to:ˉgi*, he came back.
5. l c; *ˉdi_ma:ˉdan_nˉmi*, to look down.

b. long syllables:
1. long vowel; *_a:ˉmim*, pretty soon,
ˉa'ˉla-muˉgi, dog.
2. sh c + l v; *_iˉtu:_ni*, our (2)
_tsiˉha:_yi'_dziˉmi, we went along.
3. sh c + l v + sh c; *_dzi_hi:sˉ'i*, we (2) said.
4. sh c + sh v + l c; *ˉbal'_mas*, soon,
ˉmann_dza, then.

The length-values of sounds, then, are these:

short consonant	= 0
long ,,	= 1
short vowel	= 1
long ,,	= 2

It takes one unit to make a short syllable, two to make a long one.

It will have been noticed that a vowel or consonant plus glottal stop has been counted as equal to a long sound. This has been done because in Achumawi you are left free to pronounce a fully long sound or break it off with a glottal stop, as long as you do not upset the length-value of the syllable.

§ 4. *Tones.*

Achumawi is a tone language, i. e. differences in pitch-tone are distinctive semantically and, to a certain extent, morphologically. There are two tonemes, a high, level tone and a low, level one; proper rising or falling tones do not occur, though there seems to be a tendency among some of the younger people to pronounce all final syllables on a low or falling tone, regardless of whether the syllable should ideally have a high tone.

Thus *_tsɛ̄hɛp̄tɛ_ɛ̄ma*, we all went home, has also been recorded *_tsɛ̄hɛp̄tɛ_ɛ_ma* or *ˋma*. But this lowering of the final tone is by no means universal.

Combinations of high and low tone on rearticulated vowels and on short vowel and following liquid occur quite frequently; e. g. *ˉyam_ma_tsuˉi_i_ga*, after eating, *ˉdi_maː ˉdan_nˉmi*, to look down.

Some of these forms are due to the disappearance of a consonant by assimilation, thus *ˉdam_miːˉgu_u_tsi_suˉwa* I will not eat, has a *d* in careful pronunciation, *-ˉgu_du_tsi-*. The same is true of the syllabic consonants; we find, for instance, *ˉnnˉlaː_duˉwi*, white man, < *ˉwiˉniˉlaː_duˉwi*. But it is impossible to say now whether they have all been developed that way.

Examples of words distinguished only by tone are the following: *ˉsiˉnuˉwamˉma*, I stole, *ˉsi_nu_wamˉma*, I got plenty to eat; *ˉsaːˉiː_dzuˉmi*, I go along, *ˉsaːˉiː_dzuˉmi*, I wade across (comp. *ˉsaːˉiː_dzu_mi_dzuˉmi*, I go along, wading across now and then).

Achumawi has no real tone-conjugations in the African sense, but some verb-stems regularly change their tones in certain forms (IV Conjugation). Thus *ˉdzinˉdzɛˀ_paˀˉɑi*, shut thy eyes! but *ˉdzinˉdzɛˀˉpaˀ_ɑa*, you all shut your eyes!. (The final vowels are suffixes.)

TEXT.

ˉbalˀ_mas	*_yu_tɔːˉgi*	*_makˉaːˌθə*
Just now	having arrived	Mc. Arthur
ˉwɛ_yɛ_du	*_tsiˉhaˀˉtsaːˉlaˉduˉwi*	*_tawn*
from	we (2) were standing around	town

_hak_tsan ˉnnˉlaː_duˉwi ˉiˉyaˉqaː_luˌwɛyˉgi.
two white men they (2) drive hither.

ˉmann_dza ˉstsɛ_lɔ_aˀˉyaː_duˉma ˉtsu_wiˉtɛː-
Then they (2) asked us (2) do you (2)

ˉwit_mə_dziˀˉi ˉpitˉri_və_wa. ˉhaːˉa _dzi_hiːsˉˀi.
understand Pit River-like. Yes we (2) said.

ˉma ˉstsɛ_lɔ_aˀˉyaː_duˉma ˉtsuː_miˉdzaɬˉl-
Then they (2) asked us (2) do you (2)

ˉlaˀqˉti ˉbɔːk_li ˉday_yiˀ_dzuˉgiˀ_wa. ˉhaːˉa
like Berkeley to go along. Yes

_dzi_hiːsˉˀi. ˉmam _tsiˉhaˀˉtsaː_duˉmi
we (2) said. Then we (2) got in

ˉa_ru_mu_bil_waˉdɛ. ˉmann_dza ˉdilˉluː_dzi
in the automobile. Then house

_tsɛˉhɛpˉtɛ_ɛˉma. ˉmann_dza _dzi_hiˉnis_siːˉgi
we all went. Then we (2) dressed

_iˉtuː_ni _disˉsiː_dzi. ˉmann_dza _tsiˉhaː_yiˀ-
our (2) clothes. Then we (2) went

_dzuˉmi ˉqa ˉbɔːk_li. ˉmann_dza ˉqa
along the Berkeley. Then the

ˉrɛ_diŋ _tsɛ_huˌtɔmˉma ˉma ˉgɛ_i _tsaˉham-
Redding we all arrived and there we all

ˉmi_iˉma. ˉyam_ma_tsuˉi_i_ga _taˉqa _tsɛ-
ate. Having finished eating again we

_hupˉtɛ_ɛˉma ˉmaˉhay_ga. ˉmann_dza _tsi-
all went all night. Then we

_hiˉnaː_tɔmˉma. ˉbaːˉlaˉwi_dak_tsa _tsiˉhiˉnaˀ-
all arrived. For a little while we all sat

_qɔː_wa_dzuˉma. ˉmann_dza _tsiˉhaˉnaˀˉmaː
around. Then we all went to

_duˉma.
bed.

NOTES

PHONETIC SHIFTS IN CHEYENNE.

Cheyenne is a strongly divergent member of the Algonquian stock. It seems as if the transformation has been self-evolved and not due to extraneous influence. Thus, the number of even plausible Siouan loan-words is but a handful. On the other hand, I have a collection of more than seven hundred words and stems which are demonstrably Algonquian, even if these are but a fraction of the total vocabulary. It appears that the number of complex phonetic shifts, for the most part determined by adjacent sounds, is enormous. These involve the loss of consonants, at times of whole syllables, the transformations of consonants and vowels, the leveling of old vowel-quantities with a redistribution of such quantities, etc. To such an extent have these wrought havoc that words have been transformed almost beyond recognition. Who would suspect that *maistō'u* throat, comes from **mekuntākani*, *ma'éx^{a}* eye, from **meckēncekwi; ho'ist^{a}* fire, from **ickutāwi*? Yet it can be rigorously demonstrated. For Proto-Algonquian *e* becomes *a* in Cheyenne (before medial *n*, *s* and *ht*) which changes to *ā* with high tone when medial *p* between vowels is lost, unless a dipthong ensues; *k* is lost between original *e* and *u*, and as *u* normally becomes *i* a dipthong ensues (but *-āka* contracts to *-ō-* with high tone, but yields *ō'^{u}* when original following final *ni* is lost; *-akā-* becomes *-ō-* with high tone; and similarly *-aka-*; original *-ekē-* becomes *āi*; (the remaining history of original *k* is too complicated to be given briefly, save that terminal *kwi* is lost and a preceding original *e* becomes ^{a}, but the combination *-ekwi* after original *'t* and *s* becomes *-ā'*, with high tone); this diphthong must be kept apart from the *ai* which arises from original *-esē-*, for their phonetic effect is different, but apparently is the same as when derived from original *-epē-*; original *nt* (which occurs only medially) normally appears as *ht*, as in Cree and Menomini, but changes to *st* presumably under the same conditions as original *t*, and Cheyenne *t* from original *y*, (though Cheyenne *t* from original *l* apparently is exempt from such a change) namely, after original *i*, *ē*, *u* (which normally merge into *i* in Cheyenne), and *ai* when derived from original *eku* and *epē*, but not *ai* when derived from *esē* (and this *st* becomes *sts* under the conditions whereby *t* becomes *ts*, that under the influence of following palatals vowels, irrespective of the source); original *-ck-* between vowels normally becomes *'*, though *-ēcke-* contracts to *-i-*, and apparently there are some other changes under special conditions; original *ē* normally appears as *i*, but *e* under special conditions, and terminal *-ēpa* is lost; final *wi* as well as final *wa* is regularly lost; *ā* when originally final or secondarily so, becomes ^{a}; original *i* becomes *o* if the next syllable contains an original *u*; *-nc-* normally appears as *-x-*, but as *-š-* if an original *i* immediately follows; original *α* normally becomes *o*, though *u* before *m*, *n*, and *'* when arising from original *hk*, and medially *"* under conditions not as yet clear, and regulary when preceding terminal *-ni* which is regularly lost in polysyllables, and *ō* when original following *sw* appears as *h*, and *ō* in the combination *ōi*, arising from original *-akō-* (original *ō* normally becomes *i*, but the detailed history is complicted), and there are some other minor changes. Incidentally the chronology of these shifts must be ever taken into consideration. Another potent factor must also be reckoned with, namely, analogy. At times the plural of a noun has been influenced by the form of the singular, the reserse of what has happened in a few cases in Cree. The terms for bodily parts combined with possessive pronouns have frequently been rebuilt analogically. The so-called "intervocalic *-t-*" in verbal forms has been entirely wiped out. Thus it appears that the morphological transformations are due to phonetic shifts and analogy. I do not know a single Cheyenne morphological trait that is due to extraneous influence. The speechform has remained Algonquian.

I am not in a position to report on Arapaho and Blackfoot, two divergent Algonquian languages, with any degree of confidence, save to say that I have worked out a number of phonetic shifts in both, with the result that the number of demonstrably Algonquian words has decidedly increased in both. This last applies especially to Blackfoot. Very fortunately in Cheyenne, Arapaho and Blackfoot the semantic transformations do not seem to be very radical.

In conclusion it may be said that none of the above-mentioned languages contributes much towards the reconstruction of the parent Algonquian language, of which the historical languages are the descendants. An exception must be made in one or two cases where Cheyenne, though aberrant, is clearly archaic.

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